

# Air Conditioning & Refrigeration News

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## Fair Trade Law Effect on Prices Probed By FTC

**Electrical Appliance Trade Has a Leading Role In Investigation**

WASHINGTON, D. C.—Electrical appliances are scheduled to have a prominent place in the investigation which the Federal Trade Commission has been making for the past several months into various phases of resale price maintenance laws, in an effort to determine whether or not they have boosted prices to the consumer.

Current phase of the investigation concerning electrical appliances is contained in a questionnaire which is being sent to manufacturers, asking them to submit a report of their operations under the resale price maintenance laws. FTC scrupulously avoids all reference to these laws as "fair trade" laws.

The manufacturer is asked to fill out two forms, one a net price, cost, and volume report, and the other a statement of minimum pricing. The questionnaire, when filled out, aims to give FTC a comparison of volume of sales, profits, and prices between states where the manufacturer is operating under resale price maintenance laws and those in which he is not.

The comparative study will be made between selected cities of similar size and business conditions, one in a fair trade, and the other in a non-fair trade state. Sales of the fair trade manufacturers will be compared with non-fair trade competitors. A report is asked for quantity pricing, net sales, and fact.

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## Household Sales In Sept. Gain 10,000

DETROIT—Beating the figure for the same month of 1938 by 10,000 units, shipments of household electric refrigerators by manufacturers to distributors and dealers throughout the world totaled 85,800 units in September, to bring the mark for the first nine months of the year to 1,841,000, according to estimates by AIR CONDITIONING & REFRIGERATION NEWS.

All-industry world shipments in September of 1938 totaled an estimated 75,800 units, and the total for the nine months' period was 1,285,900 units.

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## Union Raise Hinges On Service Profits

MILWAUKEE—An informal joint committee of Milwaukee appliance dealers and distributors is holding conferences with representatives of the Servicemen's Union on the union's petition for an adjustment of wages.

First meeting of the committee was held on Oct. 31, and a second conference was set for Nov. 6. Initial meeting developed the fact that the question of wage adjustments is closely related to the problem of making the service department a profitable operation, and the union has promised to submit a program aimed in this direction. Present contract, adopted in April, 1938, was renewed this year with a consideration that the union could ask a reconsideration of the wage scale as of Sept. 15.

## What's This Trade-In Thing Coming To?

Bathtub For Refrigerator — — —

INDIANAPOLIS—Add to your list of unusual trade-in deals the one made recently by William H. Bowen, salesman for Citizens Gas & Coke Utility, who took in a bathtub on a mechanical refrigerator sale.

The customer, a physician who makes a hobby of photography, needed a water temperature of 58° to develop his films, and Mr. Bowen convinced him that a mechanical unit was the answer to his problem. Only place to put the refrigerator was in a made-over bathroom, but a bathtub occupied the available space.

The more the doctor looked at it, Mr. Bowen says, the more convinced he became that he ought to trade in the tub on a refrigerator. He finally did—for \$5, the highest bid Mr. Bowen would make.

— — — Piano For Down Payment

LONG BEACH, Calif.—One refrigerator sale made recently by King S. Beardsley of the McCrery Music Co. here, really was music to his ears—for he took in a piano as part of the down payment.

## Norge Unaffected By Borg-Warner Strikes

DETROIT—Strikes in some divisions of the Borg-Warner Corp. have not affected production of Norge household refrigerators, ranges, and washers, it was asserted last week by officials of the Norge division of Borg-Warner Corp.

Norge division plants in Muskegon, Mich. are in full production on Norge appliances, it was stated.

Status of the strike in the Borg-Warner units in Detroit remains unchanged during the past week.

## FTC Opens Trial on 'Good Housekeeping'

NEW YORK CITY—Hearing of Federal Trade Commission's case against Good Housekeeping magazine on charges of unfair methods of competition and unfair and deceptive acts in commerce growing out of the Good Housekeeping "seal of approval" got under way here last week, to the accompaniment of more than the usual amount of legal skirmishing between attorneys for the opposing factions.

First witness, Warren G. Agry, vice president and general manager of the publication, declined to produce certain records called for in the FTC's subpoena, explaining that his board of directors had refused him permission to do so on the grounds

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## G-E Starts \$2,000,000 Chicago Building

CHICAGO—Construction has been started here on the new \$2,000,000 Chicago and midwest headquarters of General Electric, a project which when completed will bring G-E's Chicago activities, now spread in nine different leased buildings, into a single headquarters covering an entire city block, located only a short distance southwest of the "loop."

The new structure, scheduled to be completed next October, will have seven stories and a basement, and will house midwest G-E headquarters, service, and warehouse departments, as well as offices of R. Cooper Jr., G-E distributor, and General Electric Supply Corp. G-E activities in 11 states and parts of three others are managed out of Chicago.

## First Convention Of Locker Plant Owners Planned

**Program Announced For Exhibition & Convention In Des Moines Dec. 7**

DES MOINES, Iowa—Plans for formation of the National Refrigerated Locker Association will move one step nearer completion at Hotel Fort Des Moines here Dec. 7 when the first national convention of the refrigerated locker plant industry, planned and staged under the direction of the national association's provisional organization committee, opens its doors to locker plant owners and operators from various sections of the country.

Speakers well known to the locker industry will lead off the convention's educational program. More than half of the 50 available display booths have already been reserved by manufacturers of all sorts of locker plant equipment. Entertainment will be sprinkled liberally throughout the three-day program.

Unable to definitely announce all of the convention program as yet, Albert Guggedahl, secretary of the provisional organization committee, has nevertheless named some of the speakers scheduled.

John E. O'Brien of New York City, associate managing editor of The Progressive Grocer, will present the results of a personal survey of locker plant operation in connection with groceries and meat markets.

John Brandt of Land O' Lakes Creameries, Minneapolis, will give pertinent information regarding lock-

(Concluded on Page 11, Column 3)

## Mars & Plouff Get Ansul Positions

MARINETTE, Wis.—C. V. Mars, who for the past several years has been contacting jobbers and servicemen for Ansul Chemical Co. in Pittsburgh, Philadelphia, Baltimore, and Washington, D. C., has been transferred to the main office of the company here and placed in charge of all commercial sales of sulphur dioxide.

Tom Plouff, a newcomer to the industry, has been made district manager of Ansul covering the states of Minnesota, Iowa, North and South Dakota, Nebraska, and the western half of Missouri. Mr. Plouff will headquarter in Des Moines, Iowa, where a new Ansul branch office will soon be opened.

## Commercial Sales In September Up 50%

DETROIT—A total of 10,864 commercial refrigeration machines for use both individually and in self-contained equipment were sold to distributors and dealers in September by members of the Refrigeration Division of National Electrical Manufacturers Association.

This is an increase of about 50% over the number of machines sold in September last year. While the number of machines sold for export is slightly smaller this year than last, there does not seem to have been a great dropoff in the export business as might have been estimated because of the war.

The increase came chiefly in self-contained equipment, since the comparative figures for condensing units sold individually (not part of self-contained equipment such as ice cream cabinets, beverage coolers, etc.) was 6,655 units this year compared with 5,170 units last year.

## Packard Introduces Car Cooling Unit As an Accessory

DETROIT—First announcement of an air-conditioning system using mechanical refrigeration, installed on passenger cars as a standard, factory built, extra-cost accessory, was made by the Packard Motor Car Co. here this week. Using a reciprocating compressor driven from a pulley on the fan belt shaft, the new system develops 1½ tons of refrigeration at 60 miles per hour, and 2 tons at 80 miles per hour.

The new conditioning system also includes provision for winter heating, and both the cooling and heating coils are located back of the rear seat in standard sedans. Air is drawn under the rear seat, over the coil, and then introduced to the car body at a point directly behind the heads of rear seat passengers. Air is deflected upward along the roof of the car by means of the fan. Control of the fan is by means of a rheostat on the dash. One hundred per cent recirculated air is used.

Refrigerant lines run from the compressor, which is mounted on the motor, to a condenser, mounted directly in front of the radiator. From this point the refrigerant goes to a receiver located underneath the body and thence to the low side coil behind the rear seat. Standard refrigerant connections are used, but refrigeration lines are mounted against the frame where they are not subject to twisting or vibration.

The conditioning unit is equipped with an air filter, which is said to remove the majority of dust and pollen from the air. Ventilation is obtained by using the standard wing ventilators on the front windows.

Installation price of the new conditioning system is expected to be approximately \$275 including the cost of special insulation in the top

(Concluded on Page 4, Column 1)

## Convention Season Is Here! Stewart-Warner & Hotpoint First Up

S-W In Chicago Nov. 27

CHICAGO—Stewart-Warner's annual refrigerator sales convention will be held at the Edgewater Beach Hotel here Nov. 27-28. Distributors and their salesmen, servicemen, and district managers who attend the event will be shown the company's new models for 1940.

"Quality Lane," an exhibition of the company's products and the parts and processes that go into it, again will be an added attraction at this year's preview meeting. A special section of the convention will be devoted to distributor servicemen.

James S. Knowlson, chairman of the board and president of the corporation, will head the list of convention speakers. F. A. Hiter, vice president and general sales manager, will discuss 1940 appliance sales and merchandising plans. Other speakers include: Charles R. D'Olive, manager of the household appliance division; Joseph C. Elliff, sales and merchandising executive; C. C. DeWees, advertising manager; and A. B. Dicus, vice president and account executive for Hays MacFarland & Co., S-W advertising agency.

Hotpoint in Biloxi Dec. 2

BILOXI, Miss.—Hotpoint's 1940 line of electric refrigerators and other appliances will be shown to approximately 200 distributors from all parts of the country at a national convention in the Edgewater Gulf hotel here Dec. 2 to 5.

The four-day "Partners' Meeting," in addition to previewing new models, will spend a good share of the time considering Hotpoint's merchandising and promotional plans for next year.

## No Effect Seen on Refrigeration In U.S. War Plan

**'Normal Production' Seen As Likely Course By War Dept. Official**

WASHINGTON, D. C.—In the event that the United States should go to war, it is likely that refrigeration and air-conditioning plants will continue to produce their normal products, in the present opinion of some officials of the planning branch of the ordnance department of the U. S. War Department.

That was the substance of the reply to an inquiry on this matter addressed to the War Department. No direct answer was given to the question of whether or not the refrigeration and air-conditioning industry would be considered one of the industries making "essential" products, and thus being assured of all the necessary materials to make such products in wartime. The plumbing and heating industry, for example, is said to be one of the fields whose products have been labeled as "essential."

The reply to the inquiry came from Col. H. K. Rutherford, Director, Planning Branch, Ordnance Department, U. S. War Department, and was as follows:

"This will acknowledge receipt of your letter asking if any plans have been formulated for the utilization of the refrigeration equipment industry in the event of an emergency. Your patriotic interest in preparedness is appreciated.

"Plans for industrial mobilization take into consideration all productive facilities. It is contemplated that in any major emergency all industry would participate either directly or indirectly in the industrial effort. However, although lists are maintained, specific facilities are definitely allocated in peacetime only for production of items of munitions which appear to present serious problems in procurement.

"It cannot be stated definitely at this time what the role of the plants now making refrigeration and air-conditioning equipment will be. However, it is believed likely that facilities of this type will continue to produce their normal products."

## Preliminary Program For ASRE Announced

NEW YORK CITY—A ceremony which will commemorate the thirty-fifth anniversary of the founding of The American Society of Refrigerating Engineers will be one of the principal features of the annual meeting of the society to be held Jan. 17-19, 1940, at the Blackstone hotel in Chicago.

Recognition of charter members, introduction of honorary members, and talks on the progress of the refrigeration industry will form the program for this ceremony.

While the A.S.R.E. convention opens on Wednesday many members are expected to arrive earlier for the opening days of the Second All-Industry Refrigeration & Air Conditioning Exhibition, which will be held in the Stevens hotel, located adjacent to the Blackstone.

Other sessions of the A.S.R.E. meeting will be devoted to the latest practices in industrial refrigeration, field applications problems, and meat refrigeration, and Thursday morning, Jan. 18, will be given over to two informal conferences, one on corrosion problems, and another on the subject of refrigeration research in agriculture.

Social events at the thirty-fifth annual meeting will be directed by

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## PERSONALITIES

By George F. Taubeneck

### Strange New World

If the average appliance dealer were to walk into his store some morning and find an electric locomotive, a street car, and perhaps a Diesel-electric bus reposing on his floor, flanked by the usual collection of refrigerators, ranges, and washers, he'd likely go back out for fresh air and resolve to give up hard liquor (at least, till New Year's).

But in the opinion of H. L. Andrews (the "H" stands for "Hardage"), who hails from Missouri and has the Missourian's traditional attitude towards pat formulas and stereotyped thinking, a really successful merchant should not allow the addition of a few new product lines to throw him off balance.

And Mr. Andrews should know, for on the Fourth of July of this year he was vice president in charge of the transportation activities of the General Electric Co., charged with design, manufacture, and sale of such items as street cars, trolley buses, locomotives, buses, and similar rolling stock.

When the smoke of the Fourth had cleared away, he found that he had been taken off wheels and moved into the kitchen. He had been placed in command of the world's largest electrical appliance business. It was an amazing shift of scene, regarded in any light.

### People Are the Same

But, as the G-E's new appliance and merchandise executive points out, the man who rides across the continent behind an electric locomotive, or down to the office in the morning on a street car, is the same man who uses an electric toaster to prepare his breakfast, robs an electric refrigerator before he goes to bed, and may even sleep regularly beneath an electric blanket before many years have passed.

From one end of the day to the other, he is the consumer, and his seal of approval on a product, whether that product costs fifteen cents or a million dollars, is the thing that insures its sale.

"It is only in the last decade that the appliance industry has begun to think of its products in terms of personal services and to sell the whole conception of electrical living, instead of a number of individual devices," Mr. Andrews says.

"But in the transportation industry, for several years, we have been selling the public these personal services and merchandising the safety, convenience, and economy of electric transit. And that, to me, means consumer merchandising in any one's language, no matter who actually lays the cash on the line for the locomotive or the street car."

Accordingly, Mr. Andrews does not feel that the picture has changed for him basically. Instead of stepping from a capital goods market into a consumer goods market, he has simply "taken on a new line." The demand for sound design, efficient manufacture, and vigorous selling remains unchanged; the ultimate

customers have not changed; and he looks forward with real interest to his new fields of operation.

### Hard Hardage

Mr. Andrews has the respectful reputation among those who do not know him of being a "hard" man. They say he gets things done and to hell with saving the pieces.

They recall that for years there has been a controversy in the General Electric Co. over whether the major appliance department in Cleveland should join the small appliances department in Bridgeport, or vice versa, or whether they should continue going their separate ways.

When Mr. Andrews took over, the Cleveland boys were moved to Bridgeport, with no ifs, ands, or buts. It was as simple as all that.

They tell other tales about his capacity for making quick decisions, for sticking to his guns, for saying "No!" and for saying "Yes," too. All very interesting—but not too revealing.

Fact of the matter is, he's a very human fellow. I had breakfast with him at 8 o'clock in the morning before he was to go into a full day of conferences at the Nema conclave in Chicago. At such a time any man might be excusably abrupt, irritable, impatient, or sharp.

But I found him quite ready to talk—and talk sympathetically—of the problems of distributors and dealers in our industry.

He is erect and tall, spare, gray-thatched, with the strong physiognomy of a general in the army. You quickly get the idea that nobody pushes him around. On the other hand, he is warm and responsive, too, and simple and friendly.

### First Test Man

Although of no particular significance, it is a curious coincidence that the recently announced change in General Electric completes a cycle begun many years ago, when George P. Baldwin, who established the G-E merchandise operation at Bridgeport, was transferred to the transportation sphere of activity in 1925, as vice president in charge of steam railroad electrification.

Approximately two years after the death of Mr. Baldwin, his post was filled by Mr. Andrews, and now the latter finds himself in Bridgeport, where the cycle began.

Throughout the history of General Electric most of its key men have been trained in the now-famous "Test," which annually draws hundreds of engineering graduates from all over the world to Schenectady for further education along technical lines.

Principal exception to this program has been the appliance division, with its need for men trained in specialty selling and merchandising. These men have come largely out of the Lamp Works in Cleveland.

With the appointment of Mr. Andrews to the Bridgeport post, however, the G-E appliance and mer-

chandise department finds itself for the first time under the leadership of a "Test Man," in common with the company's other major divisions, and the move is one calculated to weld more firmly the policies and program of the appliance group to the parent organization.

The refrigeration division, which later took over the sale of other major appliances, had been a law unto itself. The "old crowd" at Schenectady and Bridgeport never really understood their more colorful Cleveland confreres. But the Cleveland boys got results, and got them in a big way, so they were given their head for a decade.

Now, however, the appliance division has returned to the fold.

### He's From Missouri

A native of Boonville, Mr. Andrews obtained his B.S. in E.E. from the University of Missouri in 1910, and in August of the same year journeyed to Schenectady to become a part of the "Test."

This was before the headquarters of the G-E transportation group were transferred to Erie, and gearless electric locomotives of the type now in service between Harmon and Grand Central Terminal in New York were being tested along the famous Bern Bank of the Erie Canal.

Attracted both by the opportunities in foreign service and in transportation, he eventually entered the latter in 1912 when he was picked by E. D. Priest to become a member of the railway motor department.

He was, Mr. Priest has told him since, one of the "largest and dirtiest 'Test men' to be found that day in Schenectady." The largeness was inherited, but the dirt was acquired as assistant head of floor test.

In 1916 he was transferred to the railway engineering department, engaged in design and general proposition work, and a year later was placed in charge of car equipment. Nine years later he became assistant engineer of the department and was placed in administrative charge, under the late W. B. Potter, one of the pioneers of the electric transit industry.

In 1929 the department was reorganized as the transportation engineering department, and Mr. Andrews was appointed engineer. Headquarters of the activity were located at the company's Erie works, and included in its responsibilities were railway equipment, air brake equipment, industrial locomotive engineering at Erie, and automotive engineering at the company's Lynn works.

### Young Vice President

This was followed, in 1934, by his election to a vice presidency, in charge of steam railroad electrification, and in 1935, he became responsible to Gerard Swope, president, for all of the company's transportation activities, which post he held at the time of the recent realignment.

When elected a vice president, Mr. Andrews was one of the youngest major executives in the transit industry, and had been connected with practically every important development in electric transit for 25 years.

So far as General Electric was concerned, this included the great railroad electrification of the New York, New Haven & Hartford line,

## G-E Brains Trust



H. L. Andrews (left) with Carl Snyder, his assistant in charge of sales.

the development of diesel-electric switching locomotives, the PCC car, and the new steam-electric locomotives that have just been placed in service by the Union Pacific.

He was particularly interested in the financial structure of the transit companies, and sought through new developments to aid them in preserving their investments and franchises, which were so seriously threatened by competition from automobiles, trucks, airplanes, and canal barges.

### That PCC Car

The so-called PCC car, which has now been placed in service in many cities, presented a solution to a serious problem, and one which in its final working-out involved situations comparable to those to be found in the appliance industry.

A new product was definitely needed, one which would appeal immediately to a public grown tired of dirty, noisy, badly ventilated, and uncomfortable street cars; one which would enable the lines to rebuild sick revenues and compete on more even terms with other modes of transportation.

Presidents of the street railway companies assembled as a committee to develop this new product, and to merchandise it properly with the aid of the manufacturers. The Presidents' Conference Committee Car was the result, with its quiet, speedy operation; new braking devices for safety; and striking modern appearance.

And by far the biggest part of the job was to resell the public, in much the same manner as the public was being sold on electric refrigeration and cookery.

Other devices belonging to this era of transportation merchandising were the diesel-electric bus and the trolley coach. The latter is probably the most interesting.

In most cities street railways have been identified with electric service companies and the revenue accruing from the use of electric cars was a highly important item.

Street railway franchises, granted in an earlier day, usually placed upon the operating company the responsibility for paving and maintenance of the right of way, and with reduced revenues the companies were

finding it increasingly difficult to hold up their end of the contract.

To maintain their franchise and investment in electric lines, they needed a vehicle less costly to purchase and operate, but one which would continue to use electric power. Such a vehicle also had to appeal to a jaded public taste.

The trolley coach was the answer. It has given new life to many of the country's sick transit companies. Lighter in weight, it was cheaper to manufacture. Employing an overhead trolley it used the available electric supply along the right of way and maintained the franchise.

But because it operated on rubber tires and required no tracks, it was easy to maneuver in crowded traffic and afforded greater riding comfort. It was urban transit's shining new product, one which could be promoted up to the hilt with both public and transit company.

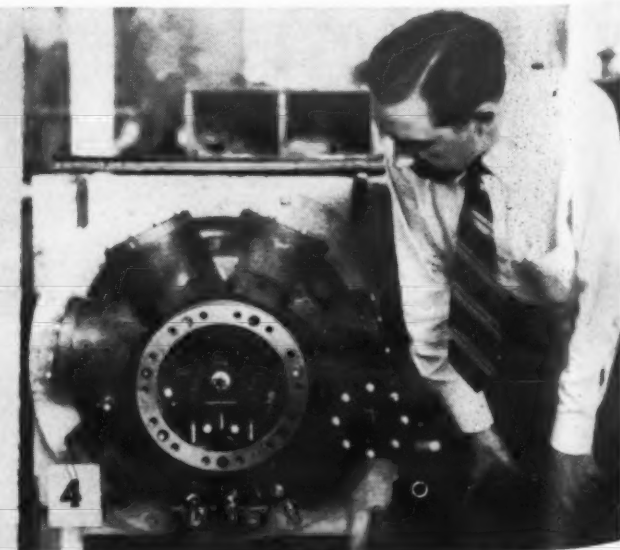
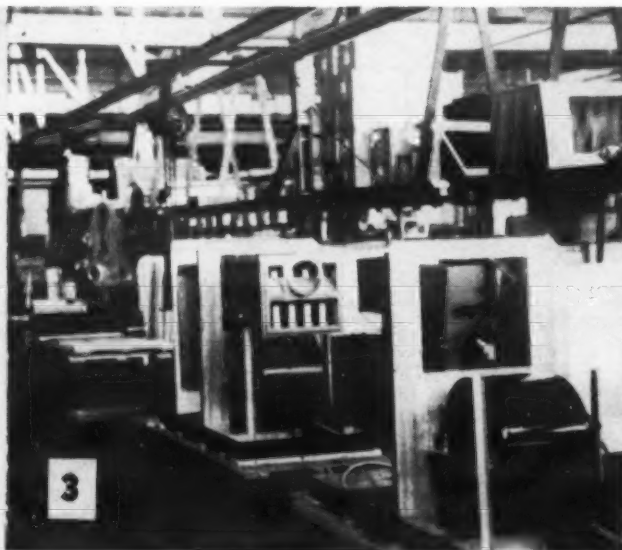
"From the day of the first 'broomstick' car," says Mr. Andrews, "electric transportation has been one of the vital factors in the electrical industry. Most of the great electrical pioneers were engaged in it at one time or another—such men as Edison, Steinmetz, Westinghouse, Stanley, Field, Thomson, Sprague, Coffin, and others—and with lighting it made up the bulk of the business and introduced the public to electricity."

"Early profits from electric transportation were plowed back into appliance development, early solutions in engineering and manufacture paved the way for today's operations, and all along the line the key men in the industry have had to sell their wares, first to the ultimate consumer, and second, to an operating company," Mr. Andrews observes.

And it is the transportation industry, with its awareness of public tastes (and fickleness!) and its wealth of engineering and manufacturing experience, which constitutes the background for the man who will henceforth direct General Electric's appliance business.

Hence it is that Mr. Andrews, instead of giving headroom to the headaches that might naturally accrue to one thrust suddenly into the chaotic and volatile scene of appliance merchandising, views the prospect with equanimity. He intends to go on selling the personal services of electricity.

## Airtemp Gets Set For Big Year In Packaged Air-Conditioning Business



(1) Col. Downey, president of Chrysler Airtemp, is back on the job after a long illness. (2) Assistant Sales Manager Robertson, a spark plug in Col. Downey's new executive set-up. (3) Production lines in the big Dayton plant are turning out packaged units at a steady rate. (4) V. P. Black, advertising manager, studies an Airtemp radial compressor on the line.



# Air Conditioning

## Cooling Extended To Smaller Stores As Chains Spend 7½ Million In '38

NEW YORK CITY—Evidence that air conditioning is being extended to smaller stores is presented in a recent survey by Chain Store Age Magazine of 95 identical chains for 1938 and 1939. These concerns spent \$1,736,018 to air condition 221 stores last year, and \$1,503,206 to equip 264 stores in 1939. Total chain store expenditures covering 300 concerns were \$7,578,357, the survey shows.

Thirteen per cent of all stores modernized this year were equipped with air conditioning. Reports from chains in six fields showed that 2.1% of the stores operated were now equipped, and that saturation among these stores had reached 9.1%. In the drug and restaurant chain groups, market saturation had reached 20%.

Greatest expenditure for air conditioning was in the variety-department store group, which spent a total of \$2,750,767, or 36% of the total spent by all chains. Indications point to a heavier expenditure by these chains in 1940, the survey states. These chains equipped 52 stores this year and 69 last year. Air-conditioned units in this field total 268 stores to date.

Drug chains lead the list in percentage of stores air conditioned. Stores reporting, including well over 50% of the entire field, show a saturation of 29.7%. The drug chains spent \$755,480 for air conditioning this year, only 6% below the amount spent in 1938.

Increased interest in air conditioning was shown in the chain grocery field, which spent \$310,500 for equipment—a sharp increase over prior years. Percentage of saturation in this field is very low, as only 0.4% of the 40,000 chain grocery stores now have air-cooling equipment.

Restaurant chains spent \$661,600 in 1939, increasing the saturation to 21.3%.

### Air Conditioning Aids Suburban Business

RICHMOND HEIGHTS, Mo.—Extension of air conditioning to the suburban areas of large metropolitan centers is indicated by the concentration of jobs in the "acre-and-a-half" business section of this St. Louis suburb, covering food stores, eating houses, drug stores, bars, and theaters.

Most notable installation is perhaps that in the A & P Super Market, which does a volume business of a definitely "price" nature, to provide greater comfort and shopping conditions. Next door is Straub's market, catering to the "classes" and doing most of its business by phone, which has installed air conditioning primarily for employee efficiency in dispatching orders.

Just east of the A & P and Straub's is the Parkmoor, drive-in eating place, and across the street is Town Hall, another eatery, both air conditioned. In the same street is the Busy Bee confectionery and restaurant, also equipped with cooling.

A block to the west of these establishments are three more air-conditioned business places—Glazer's drug store, Frazee's restaurant, and the Richmond Buffet, the latter a restaurant and bar. Completing the air-conditioned ensemble are two theaters, the Esquire and the Richmond, the latter of which was the first in the section to install cooling equipment.

Increases in business ranging from 18 to 250% were reported by these establishments as the result of installing air-conditioning equipment. Gain of several notches in employee efficiency and general store spirit also were reported by all user firms.

### Chilean Firm Represents Trane

SANTIAGO, Chile—Assler & Veitl, Ltda. has been appointed representative for Trane Co. equipment for the Republic of Chile.

## Owner Now 'Sold' on Air Conditioning After Failure of System 10 Years Ago

DETROIT—Experiments with air conditioning which proved far from satisfactory 10 years ago did not prevent George A. Condos, owner of the Normandie Bar and Puritan Dining Room, from becoming a purchaser of modern equipment in 1938 and 1939.

It was in 1929, Mr. Condos reports, that engineers for a concern no longer in the air-conditioning business made a survey of his Puritan Grill, located near the General Motors building in uptown Detroit. Their recommendation was that two direct expansion suspended (methyl chloride) units be installed, powered by 1-hp. compressors. When it developed that the 1-hp. compressors did not produce the required capacity, they were changed to 2 hp. and 1½-hp. units, respectively.

After considerable experimenting it was found that 3½ tons of cooling equipment was not sufficient to produce the desired results in a res-

taurant seating approximately 100 people. It was nearly 10 years before Mr. Condos again purchased air-conditioning equipment.

Early in 1938 the Normandie Bar was opened next door to the Puritan. At this time a 5-ton Frigidaire central-station system was installed with ductwork running along over the bar.

This system has proved entirely satisfactory, Mr. Condos reports, in spite of the fact that the room has an unusually low ceiling and is often crowded.

At the present time the Puritan Dining Room is being remodeled and equipped with a 10-ton Frigidaire conditioning system. Experience in the Normandie Bar last year gave ample assurance that the new equipment will be a good investment, Mr. Condos states. Not only did customers like the air conditioning, but employees hated to go home during severe hot weather.

## First Cooled Hospital On West Coast Uses 2 Separate Units

SACRAMENTO, Calif.—First completely air-conditioned hospital west of the Rocky Mountains is said to be the Sutter Maternity Hospital here. With capacity for 58 mothers and 58 infants, the building is equipped with a complete year-around air-conditioning system.

Nursery, surgical, and delivery suites are maintained at 82° F. with 60% relative humidity in summer, and 80° F. with 55% humidity in winter. Guest rooms are maintained at an 80° F. temperature with 45-50% humidity. The differential in temperature of these two sections makes it necessary to have a system consisting of two separate units, one to serve the service rooms and the other for guest rooms.

Air conditioning was also installed in the operating room, recovery room, and two wards of the Federal Air Depot Hospital near here.

# SPECIFICATIONS

## for Air Conditioning and Refrigerating Installations

ONE of the most exacting duties of an architect or engineer is to draw concise and invariable specifications for the guidance of contractors and the protection of his client. Such specifications should be founded on the specifications and regulations of nationally known and accepted authoritative bodies interested solely in public welfare.

The National Board of Fire Underwriters, Underwriters' Laboratories, Inc., and the National Fire Protection Association are institutions of this class. Each has contributed to the fundamental specifications covering air conditioning and refrigerating machinery. Every architect and engineer should have a copy of their rules and specifications:

(1) NBFU Pamphlet No. 90 entitled, "Regulations of the National Board of Fire Underwriters for the Installation of Air Conditioning, Warm Air Heating, Air Cooling, and Ventilating Systems as Recommended by the National Fire Protection Association." (This is also the A. S. A. standard Z33.2). Address National Board of Fire Underwriters at 85 John Street, New York City, or 222 West Adams Street, Chicago, Illinois, or Merchants Ex-

change Building, San Francisco, California.

(2) Underwriters' Laboratories, Inc., Subject 207, "Standard for Air Conditioning and Commercial Refrigerating Equipment." Address 207 East Ohio Street, Chicago, Illinois.

(3) Underwriters' Laboratories, Inc., Subject 207, "Standard for Unit Refrigerating Systems." Address 207 East Ohio Street, Chicago, Illinois.

(4) Underwriters' Laboratories Report MH2375 entitled, "The Comparative Life, Fire, and Explosion Hazards of Common Refrigerants." Supplies of this publication are exhausted at the Underwriters' Laboratories, but may be consulted in most public libraries in the United States. Reprints have been made by Kinetic Chemicals, Inc., Tenth and Market

Streets, Wilmington, Delaware, and are available at \$1.00 each.

It is often hard to compare values and capacity of the equipment offered and so it is well to provide that the contractor shall express his rating according to the following methods:

(1) "Standard Method of Rating and Testing Mechanical Condensing Units"—Price 15¢.

(2) "Standard Method of Rating and Testing Air Conditioning Equipment"—Price 20¢.

These standards are obtainable from the American Society of Refrigerating Engineers, 37 West 39th Street, New York City.

An example of concise yet comprehensive specification formulation that everyone should have may be obtained for 5¢ from the Superintendent of Documents, Government Printing Office, Washington, D. C. It is "Federal Specification for Air-Conditioning Units (Room-Coolers); Electric-Motor-Driven, Portable," 00-A-361 of July 23, 1938.

By following these rules you avoid any possibility of penalty to your client in insurance rates and promote safety of life and property. The "Freon" refrigerants meet the requirements of these specifications.



KINETIC CHEMICALS, INC., TENTH & MARKET STREETS, WILMINGTON, DELAWARE



## Packard Offers Car Cooler As Accessory

(Concluded from Page 1, Column 4)  
and side walls of the sedan body. No systems will be sold or installed on cars, except in the regular course of factory production.

Change from summer to winter driving is accomplished by the regulation of two dampers located on the sides of the cooling unit mounted in the trunk compartment.

In announcing the new conditioning equipment, W. M. Packer, vice president of distribution of the Packard Motor Car Co., asserted that the new unit, which will be called the Packard Weather Conditioner, operates on the same principle as that of the home mechanical refrigerator.

Ralph M. Williams, service engineer for the Packard company, states that service on the air-conditioning systems will be handled by established dealers and distributors for Packard cars.

Cars equipped with the complete heating and cooling system are being exhibited at the Chicago and Oklahoma City automobile shows.

## Drollinger, Sorenson & Wilmore Given Field Sales Posts With G-E

BRIDGEPORT, Conn. — G. E. Drollinger, S. W. Sorenson, and Paul C. Wilmore have been appointed to new posts as appliance field representatives of General Electric's appliance and merchandise department.

Mr. Drollinger will be electric sink and kitchen specialist in the Philadelphia district, while Mr. Sorenson and Mr. Wilmore will represent the household refrigeration section, the former in Minneapolis and the latter in a district yet to be named.

For more than three years, Mr. Drollinger has been associated with the G-E dishwasher and disposal sales section, doing field work as assistant to the manager. He also has been a lecturer in the G-E Institute at Nela Park, Cleveland.

Mr. Sorenson has been with G-E since 1927, when he joined the company's distributor, D. S. Stopple, Inc., at Waukesha, Wis., as a dealer supervisor. Later he was with Westinghouse in refrigeration sales work, being stationed at times in New York City, Newark, N. J., Allentown, Pa., Philadelphia, and Washington, D. C.

Mr. Wilmore started in the appliance industry as a salesman for Ohio Public Service Co., later becoming appliance supervisor, and rejoining the industry, after association with a brokerage firm in New York City, with Westinghouse in 1931.

His work with Westinghouse included sales development in refrigeration and the organization of an educational department covering the full line of household and commercial refrigeration, air conditioning, ranges, water heaters, and laundry equipment. During recent years he has spent several months of each year on the West Coast.



**Dayton V-BELTS**

Silent, vibrationless, dependable, long-lasting. Powerful grip prevents slippage. A nearby distributor carries a complete stock for appliances and machines.

THE DAYTON RUBBER MFG. CO., DAYTON, OHIO  
World's Largest Manufacturer of V-Belts



**Copeland Standards**

**Deliver Trouble-free Service**

Throughout the world, in hundreds of thousands of installations, Copeland units are delivering economical, trouble-free performance. There is a Copeland condensing unit for every refrigeration and air conditioning need. Twenty-one years of refrigeration leadership. Write today for complete information.

**COPELAND REFRIGERATION CORPORATION**  
Sidney - Ohio

## Opening Moves Indicate a 'Finish Fight' Against the FTC Order Banning Use of 'Good Housekeeping' Seal of Approval

(Concluded from Page 1, Column 2)  
that such records are not actually in his possession.

Attorneys for Hearst Magazines, parent company of Good Housekeeping, entered repeated objections to rulings by the trial examiner as to what was admissible to the record, and the presence of a company stenotypist at the hearing was taken by some observers as an indication that the publication means to get a full record of proceedings, for use in case an appeal is taken to a higher court.

In replying to objections by Hearst attorneys regarding his actions in instructing the official stenographer to keep certain remarks "off the record," the examiner said he was determined not to encumber the record, and added that Good Housekeeping interests may be assured of fair play.

Another government witness last week was Donohue Shewell, account executive for an advertising agency which handles Personal Finance Co. advertising, who testified that mention was made in a radio script of the guarantee awarded the loan agency by Good Housekeeping after

a survey of its business methods.

James Fort, counsel for FTC, questioned the witness without avail as to the extent of the finance company's advertising in the magazine, and Isaac Digges, Good Housekeeping attorney, brought out in cross-examination that there had been no proposal by the magazine that advertising in it be continued to obtain the guarantee mentioned in the radio script.

Stewart E. Brush, rug cleaner and former member of the Certified Rug Cleaners' Institute, another witness, testified that his association had advertising in Good Housekeeping in 1935, and that his firm paid about \$450, or 1% of its gross, as its share of the appropriation. Institute dues were an additional \$250, he said.

He reported that his plant had been inspected by a Good Housekeeping Institute representative in 1935. Under cross-examination, Mr. Brush declared his company had used the cleaning procedure promulgated by the institute not only during his affiliation with it, but before and since that time as well. It was not explained why he is no longer a member of the association.

## Magazine Denies Seal Idea Is Unfair Competition, Explains Its Meaning

Dismissal of the Federal Trade Commission complaint against Good Housekeeping Magazine had been asked in a petition filed recently by attorneys for Hearst Magazines, Inc., who denied that the publication uses, or has used, unfair methods of competition or unfair or deceptive acts in commerce. The motion was denied by the FTC.

In a brief in support of its motion to dismiss the complaint against Good Housekeeping magazine, the respondent contends that even if the charges alleged in the complaint were true, they would not constitute unfair methods of competition, or unfair or deceptive acts or practices in commerce, within the meaning of the Federal Trade Commission Act.

"The main act or acts of deception alleged by the complaint may be grouped together and described as those relating to and growing out of the alleged 'Guaranty' of the respondent.

"The burden of the complaint in this connection may be briefly restated as charging that the respondent, by the use of various devices, such as its seals and the slogans and advertising matter set forth in its publication, has misled or may mislead, members of the public who rely thereon, into the belief that in purchasing articles covered by any of the said 'Guaranties' they are the recipients of an unlimited guaranty by the respondent when, in fact, according to the complaint, they are the recipients merely of a limited money-back guaranty. In other words, according to the allegations of the complaint, such purchasers are misled by the acts of the respondent into believing that they have a broader guaranty than they actually possess.

"Such a result is a legal impossibility. It is a fundamental legal principle that the scope and effect of a guaranty is that which the average reasonable man would understand and believe it to be. . . .

"Applied to the instant facts, this rule means that if the average reasonable purchaser would be entitled to believe from the acts which

the respondent has performed, or authorized to be performed upon its behalf, that he is the recipient of an unlimited guaranty, then he will, by operation of law, in truth be the recipient of just such a guaranty. Thus he is automatically and inevitably assured of having precisely that which he is entitled reasonably to believe that he possesses; any question of misleading or deceiving him as to the nature of the guaranty which vests in him becomes impossible, as a matter of law. . . .

"The very representations alleged to have been made by the respondent to the public, to the effect that it would reimburse purchasers for products which proved unsatisfactory, constitute plain and honest notice to members of the public that products may not, in every instance, be what they are advertised to be, and may not always fulfill all advertising claims made for them. In view of such statements, it is inconceivable how any reasonable member of the public would be entitled to infer that the respondent does more than represent the results of tests which it has made.

"Thus, unless it can be said that the complaint alleges, either that the respondent has not in fact made the tests which it claims to have made, or that, having made such tests, it did not reach the conclusion with regard to the specific articles which it represents itself to have reached, the complaint would fail to allege misrepresentation or deception in that regard. . . .

"The allegations of the complaint concerning the Good Housekeeping tests," the brief says, in summarizing, "are, (1) that the respondent has represented that it performs tests, and (2) that it did not perform 'scientific' tests. There are no allegations that it did not perform tests, or that it ever represented itself to have performed scientific tests.

"It is perfectly apparent that there is a vast difference between 'tests' and 'scientific tests.' In fact, the complaint itself recognizes this differentiation. It must, therefore, follow that representations that respondent conducted tests are not shown to be untrue by alleging non-performance of 'scientific' tests.

"Summarizing its contentions with regard to its testing operations, the respondent respectfully submits: (1) that it has the right to perform such tests; (2) that it has the right truthfully to represent and publicize the tests which it does perform; and (3) that in the course of performing such tests, it has a right to make a reasonable number of mistakes, provided that it does not represent as correct a test which it knows to be incorrect."



**Days WON'T COME BACK**

The love story of a girl who wasn't afraid of anything—even the truth—and of two men who got a shock

by Francis M. Cockrell

## LOVE STORY

Readers of this paper who take it for granted that F. M. Cockrell, publisher of AIR CONDITIONING & REFRIGERATION NEWS, is the same as Francis M. Cockrell, who writes snappy love stories for popular magazines, will probably be convinced that he drew on his personal experience for the illustrated article in the Nov. 4 "This Week Magazine."

The story entitled "Days Won't Come Back" by Francis M. Cockrell, concerns Joe Busby who graduated as an electrical engineer after five years hard work at Henderson University and then got his first job at seventy dollars a month.

In the Aug. 9 issue of the NEWS F. M. Cockrell wrote an answer to a letter from Donald L. Nelson, published under the heading "Service Men's Problems," in which Mr. Cockrell told about taking eight years to get through the state university, graduating as an electrical engineer, and then getting a job at seventy dollars a month.

A second character in the fictional story in "This Week Magazine" is Brent Carter "who got fair grades and always seemed to have money in his pockets and made it, somehow, all look casual and easy." This description might have been applied to Publisher Cockrell's money-making reputation at the University of Illinois, which was referred to in the NEWS a few months ago in connection with some published letters about his famed classmate Mark Van Doren.

Another coincidence is that the magazine story opens up with an old grad returning to a college fraternity reunion driving a "coupe with a California license." Last Saturday the publisher of the NEWS was driving a coupe, but with a Michigan license, to the annual homecoming of the old grads at the University of Illinois.

There he had the great pleasure of seeing the Illinois underdog team stop the great Harmon (reputed to be another Red Grange) and win decisively over the University of Michigan. Fifteen years ago Cockrell had made a similar Homecoming trip expecting to see Illinois get trimmed by Michigan. That was the year Red Grange made four touchdowns in the first 10 minutes.

Other Illinois grads on the NEWS staff, including George Taubeneck, Phil Redeker, and John Adams, who viewed the Illinois football situation as hopeless, were content to remain in Detroit to hear the game reported by radio. In his enthusiasm over the unexpected score of 16 to 7 in favor of Illinois, George Taubeneck sent the following telegram to Mr. Cockrell at Champaign:

"You must have brought them luck. Congratulations. This is the happiest day of my life. George."

The message was delivered at a fraternity reunion immediately after the game. Mr. Cockrell read it and passed it to one of the brothers, whose wife was at his elbow. His comment:

"Is George married?"

"No, he's still single."

"Well," said the brother, "I was just wondering about this being the happiest day of his life."

The above incident is dragged in in order to draw another parallel between the magazine article and the personalities on the staff of the NEWS. Of course, any article by Francis M. Cockrell, the Hollywood author, must have a girl in the picture (see illustration) and this one is "The love story of a girl who wasn't afraid of anything—not even the truth—and of two men who got a shock."

George Taubeneck, editor of the NEWS, supplied the love story Saturday evening at a dinner party which included Managing Editor Phil Redeker, and Business Manager John R. Adams, where he announced his engagement to Miss Willo Sheridan, one of Detroit's most beautiful girls. (No doubt about his "happiest day.")

Redeker and Adams were the two men who got the shock since they had long since concluded that George was a confirmed bachelor. Willo Sheridan must be "a girl who isn't afraid of anything."

Just to keep the record straight, perhaps it should be explained again that there are three Francis Marion Cockrells in the country (New York, Detroit, and Hollywood, Calif.) who are distantly related and all named after the same Francis Marion Cockrell who was U. S. senator from Missouri for 25 years. The Francis Marion who is publisher of the NEWS has never met the other two.



**You Supply the APPLICATION . . . Let Us Supply the EQUIPMENT**

No matter what the application may be . . . if it calls for comfort cooling, product cooling, air-conditioning, or commercial refrigeration . . . we can supply dependable equipment to fit the need. Write for details of our attractive distributors' arrangement.

**Lipman**  
AIR CONDITIONING

**GENERAL REFRIGERATION CORPORATION**  
Dept. AC-1 Beloit, Wis., U. S. A.

**MODEL 153**  
Water-cooled



## Commercial Refrigeration

### Food Salesmen Can Be 'Advance Agents' For Commercial Refrigeration Sales

Their Tips Provide A Line on the Really 'Hot' Prospects and Cut Down Canvassing Work

By Robert M. Price

ELMIRA, N. Y.—Wholesale meat and grocery salesmen are valuable sources of new business in commercial refrigeration and store equipment for Refrigeration Sales & Service Co., commercial refrigeration and service firm here. These salesmen act as "advance agents" among the store owners they visit, and are paid a commission for the sales they turn up.

This commercial firm has built up a list of salesmen who have become a valuable part of the sales scheme. Many of them have been calling on store owners for many years, and are on good terms with them. Selling groceries and meats, the salesmen make the rounds of stores in the district on the average of once every two weeks. Thus, any indication that a store owner is in the market for refrigeration or store equipment is relayed back to Refrigeration Sales & Service, giving it a big jump on competition.

#### HOW THEY OPERATE

Salesmen of this sort can gain an "in" where regular refrigeration salesmen would have a struggle, says B. J. Bazzett, firm member. And, he says, there is little trouble in getting these grocery and meat men to push the sale of new store equipment. They are most interested in the amount of their goods sold by the store keeper. They know that good refrigeration equipment, display cases, increase the sales of their goods, and so they are always promoting better storage and display facilities.

The goods they sell must give satisfaction, in order that they can keep on selling. Spoilage is very often blamed on the quality of meat, butter, cheese, etc., and the acquisition of refrigeration cuts down complaints of this kind, acting to the advantage of these salesmen and the store owners.

In their frequent trips to the stores, they may run onto a competitor of Refrigeration Sales & Service talking up the sale of equipment. They get in touch with Mr. Bazzett's firm at once, giving it a chance to get on the job. Any sale resulting from these tips nets the watchful salesman a commission, depending on the size of the job installed.

#### KEEP 'EM BOOSTING

It is one thing to get these salesmen to work for you; it is another thing to keep them boosting your equipment, Mr. Bazzett says. The answer is complete satisfaction in performance and service on any job installed. If the store owner is dissatisfied with his refrigeration equip-

ment, the kick-back hits the grocery and meat salesmen, as well as the installing firm.

To maintain installation and service at a high level, this firm has set up a separate service department. Two service men are employed in this department, which does household in addition to the commercial service work. Concentration, however, is on the commercial end of the business. Value of this department was explained by Mr. Bazzett.

#### 'HOW ABOUT SERVICE'

"When we are selling a display case, the customer asks, 'Who takes care of my service?' We then explain that our own service department takes care of it and promises complete satisfaction. Very often this one point will sell the job over competitors."

To keep the service in the hands of its service department, the firm puts a sticker on every case installed. This sticker is a constant reminder to the store owner that service is taken care of by the firm from which he bought the case.

Since the service men do work on jobs that have not been sold by the company, they are a good source of new business. They are completely familiar with the condition of a store's equipment, and can relay the information to the salesmen for follow-up.

The service policy of this firm came from experience and observation. Mr. Bazzett gave an example of a competitor who sold a job, and who gave poor service on it. When the store owner was ready to buy new equipment, he was advised to go to Refrigeration Sales & Service, because the reputation for service had been established. A \$3,000 order resulted. "You can't afford to be a one-time salesman in this business," Mr. Bazzett observed.

#### FOLLOW UP FOR ACCESSORIES

In addition to the line of display cases, (the firm is Hussmann-Ligonier distributor for seven counties around Elmira) a full line of store equipment is carried. When a display case is sold, the firm gets busy on the accessories.

A follow-up letter is sent immediately after some refrigeration equipment has been installed. This letter reads: "We have recently installed some very fine equipment which we hope will be of long and profitable service to you. There are several kindred lines to go with your equipment, such as slicers, choppers, scales, coffee mills, and cutlery, and when in need of these, we can supply you with the best."

Outlining the service policy, the

## Nema Companies Sell over 10,000 Commercial Machines In Sept.

The following report of commercial refrigerating equipment sales for September, 1939 was made to the Commercial Refrigeration Section of the National Electrical Manufacturers Association (Nema) by the following 16 companies:

Baker Ice Machine Co., Inc., Brunner Mfg. Co., Carrier Corp., Crosley Corp., Frigidaire Div. General Motors Corp., General Electric Co., Gibson Electric Refrigerator Co., Kelvinator Div. Nash-Kelvinator Corp., Merchant & Evans Co.,

Norge Div. Borg-Warner Corp., Servel, Inc., Uniflow Mfg. Co., Universal Cooler Corp., Vilter Mfg. Co., Westinghouse Electric & Mfg. Co., and York Ice Machinery Corp.

SALES FOR SEPTEMBER, 1939		Domestic		Canadian		Other Foreign		Total World	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1. Bottle Water Coolers—Complete.....	238	\$ 16,470	2	\$ 124	29	\$ 1,860	269	\$ 18,454	
2. Pressure Water Coolers—Complete.....	1,270	131,051	16	2,016	45	4,349	1,331	137,416	
3. Water Coolers—Low Side Only.....	70	5,385	3	152	2	112	75	5,649	
4. Ice Cream Cabinets—Complete.....	1,167	185,514	65	10,054	58	9,014	1,290	204,582	
5. Ice Cream Holding Cabinets Only (Remote).....	100	13,879	1	139	.....	.....	101	14,018	
6. Bottle Beverage Coolers—Complete.....	1,231	127,800	25	2,271	58	6,097	1,314	136,168	
7. Beverage Coolers (No High Sides).....	76	8,466	3	159	2	111	81	8,736	
8. Milk Coolers—Complete.....	2	286	1	142	2	256	5	684	
9. Milk Cooling Cabinets (No High Sides).....	2	348	.....	.....	.....	.....	2	348	
10. Commercial Evaporators—Not Reported Above (Including Cold Diffusers, Brine, and Other Spray Evaporators, Etc.).....	2,369	87,600	120	2,798	265	9,885	2,754	100,283	
11. Condensing Units Less Than 1/2 Hp.....	1,033	43,719	8	444	256	13,186	1,297	57,349	
12. Condensing Units—1/2 Hp.....	1,687	104,098	30	2,204	226	14,466	1,943	120,768	
13. Condensing Units—3/4 Hp.....	1,132	100,225	41	3,889	139	12,646	1,312	116,760	
14. Condensing Units—1 Hp.....	783	88,691	27	3,166	80	9,313	890	101,170	
15. Condensing Units—1 1/2 Hp.....	535	73,878	10	1,486	34	4,917	579	80,281	
16. Condensing Units—2 Hp.....	321	55,306	5	948	20	3,457	346	59,711	
17. Condensing Units—3 Hp.....	116	23,352	.....	.....	17	3,208	133	26,560	
18. Condensing Units—4 Hp.....	73	20,832	.....	.....	30	6,740	103	27,572	
19. Condensing Units—5 Hp.....	21	8,025	1	417	4	1,278	26	9,720	
20. Condensing Units—7 1/2 Hp.....	10	6,361	1	600	3	2,106	14	9,067	
21. Condensing Units—10 Hp.....	4	3,464	.....	.....	.....	.....	4	3,464	
22. Condensing Units—15 Hp.....	4	3,473	.....	.....	.....	.....	4	3,473	
23. Condensing Units—20 Hp.....	1	1,239	.....	.....	.....	.....	1	1,239	
24. Condensing Units—25 Hp.....	1	1,463	.....	.....	.....	.....	1	1,463	
25. Condensing Units—30 Hp.....	2	3,083	.....	.....	.....	.....	2	3,083	
26. Condensing Units—40 Hp.....	.....	.....	.....	.....	.....	.....	.....	.....	
27. Condensing Units—50 Hp.....	.....	.....	.....	.....	.....	.....	.....	.....	
28. Total—All Condensing Units (11 to 27).....	5,723	537,209	123	13,154	809	71,317	6,655	621,680	
29a. Condensers—Sold Separately Shell & Coil or Shell & Tube.....	.....	.....	.....	.....	1	160	1	160	
29b. Evaporative Type.....	14	1,292	45	1,301	1	773	60	3,366	
30. Total—All Commercial Refrigeration.....	.....	\$1,115,300	.....	\$32,310	.....	\$103,934	.....	\$1,251,544	

letter continues, "If at any time the equipment we have installed for you fails to function properly, we will appreciate your getting in touch with us at our office, as your success is our success."

In addition to its "grocery-meat" sales force, the firm has two salesmen on the road. Mr. Bazzett's partner in the business, S. H. Turner, takes care of the service and installation department, while Mr. Bazzett concentrates on sales promotion. They believe in working the market for all lines, and at all times.

#### Don Mack Is Honored

LOS ANGELES—Don Mack, of Weber Showcase & Fixture Co., has been elected one of the directors of the Industrial Marketers of Southern California, which has recently been chartered by the National Industrial Advertisers Association.

### Refrigerated Truck On Arctic Circle Run

ROVANIEMI, Finland—Although Finland and Russia have been acting rather "chilly" toward each other lately, the Finns have not let political refrigeration steal the spotlight from the commercial variety. The Merchant & Evans distributor in Finland, Keskusosuusliike "Hankkija," built two refrigerated trucks to carry general produce from Rovaniemi, which is close to the Arctic Circle.

The trucks resemble regular passenger buses, but the rear panels have been closed, and two refrigerator-type doors have been installed. The trucks are cooled by a 1-hp. Merchant & Evans "Freon" condensing unit operated by an auxiliary gasoline engine in connection with two Fed-R-Fin coils.

### Brunswick-Balke Shows \$1,235,503 Earnings For Third Quarter

CHICAGO — Brunswick-Balke-Collender Co. and subsidiaries, for the quarter ended Sept. 30 reported net earnings of \$1,235,593, equal after preferred dividends to \$2.69 a share on the common stock. This compares with \$602,488 or \$1.27 a common share for the same period last year.

Net profits for the first nine months were \$1,610,424, equal to \$3.35 a common share, and compared with \$726,065 or \$1.37 a common share in the corresponding 1938 period. Net sales were \$10,244,627 for the nine months, an increase of 30.8% over sales of \$7,829,480 in 1938.

## THE BUYER'S GUIDE

You never get a "Wrong Number" when you depend on the RANCO LINE of Household and Commercial Controls.

RANCO INC., Columbus, Ohio U.S.A.



## KASON Refrigerator LATCH

K-54B is a heavy-duty latch for large walk-in doors of refrigerators, coolers &c. Massive sealing power—Rugged Forged-Brass construction and impressive beauty of design have made this the standard quality latch of the industry.

WRITE FOR CATALOG



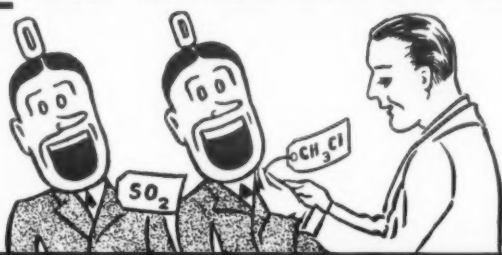
No. K-54B

**FORGED BRASS**

Kason's Forged-Brass Refrigerator Latches are acknowledged by the industry to be the highest in standard of quality. There is a Kason Latch for every refrigerator need.

KASON HARDWARE CORP'N., 127-137 Wallabout St., Brooklyn, N. Y.

### EVERY DAY IS TAG DAY AT ANSUL



Ansul analyzes, and tags that analysis on, every Ansul cylinder every day. When you specify Ansul refrigerants you specify known, proved quality without exception.

**ANSUL SULPHUR DIOXIDE METHYL CHLORIDE**

ANSUL CHEMICAL COMPANY • MARINETTE, WISCONSIN

LET THE ANSUL JOBBER NEAR YOU SERVE YOU BETTER



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## Fewer Hands

STREAMLINING has become a much overworked word today. Originally applied to principles of design which enabled objects already traveling 100 miles an hour to go faster, it has arrived at a place in the popular lexicon of today to denote modernization, reorganization, depression-busting.

It was found that when designers "streamlined" (i.e., simplified, rounded off sharp corners, smoothed down protruding objects) even so stationary an object as an electric refrigerator, it sold better. And finally, when in the spirit of the times, organizations began to simplify their procedure and prune their staffs with a view toward greater efficiency, the term "streamlining" became popular with reference to reorganization.

### Distributors 'Streamline' Their Organizations For Efficiency

Today it is a word one hears frequently when talking to distributors and jobbers. "We must streamline our organizations," they say, "if we are to continue healthy in this period of contracting margins."

As 1939 draws to a close, some refrigeration distributors find their position improved as compared with the end of 1938. This can be attributed, in part, to two factors:

(1) As Ray Cosgrove of Westinghouse puts it: "There wasn't anything wrong with specialty distribution that volume wouldn't cure."

(2) These distributors had so simplified their procedure that fewer hands touched each order.

### Smaller Groups Geared For Speed

You can call it "streamlining" or you can call it "fewer hands" (which comes much closer to describing it). But it's this formula which has had a great deal to do with the success of those distributors who are on the black side of the ledger for 1939.

Now despite the fact that they made money in 1939, these same distributors look upon the coming of the 1940's a bit grimly. If they hadn't "streamlined" their organizations, they say, their

narrower margins would have prevented them from making money in 1939. And for 1940 and 1941, they fear even smaller per-unit profits, largely because they expect continued competitive pressure on prices.

### Next Six Weeks Good Time For Action

So, having been successful in making their organizations more efficient in 1939, they are thinking about going even farther along that road for 1940. And these coming weeks, they figure, will be the time to do it.

The big idea is to cut out non-essential services and unproductive people. Do less, but do it better. Pay fewer people, but hire better help. Ask the question: What did we do in 1939 that we don't need to do in 1940?

And here are some of the lines that these reorganization plans are following:

### Study of the Figures Reveals Uneconomic Practices

1. *Cost accounting.* Find out just what it costs to handle each operation of the business. Then you'll know whether or not it's worth while to continue that operation, or to expand or contract it. Many distributors, primarily promotion-minded, have been following the "Henry Ford method" of accounting (subtract what you owe from what you have in the bank, and there you are).

2. *Fewer accounts.* Not long ago distributors were scrambling around to line up all the dealers they could possibly get into their territory. They were competition-minded, and kept saying: "If we line up this one, those Shiverator lugs can't get him." Then Sears-Roebuck came along, with only two or three stores in each territory, and demonstrated the weakness of the extensive distribution theory. And in the meantime, the small dealers were all cutting one another's throats and falling by the wayside in droves. Seeing the light, distributors worked with fewer accounts in 1939. This reduced their overhead—thus saving "hands" and money—and, somewhat to their surprise, increased their volume by a big percentage.

### Doing More Business With Fewer People

3. *Fewer field men.* A consequence of the extensive distribution theory was that distributors had to hire field men, train them hastily, and turn them out to guide their droves of small dealers every step of the way. "You stock our refrigerator and we'll teach you how to sell it," was the slogan. But the cost accountants soon began to show just how much it was costing a distributor to move merchandise that way. Now, with fewer and bigger dealers, the canny distributor has only a skeleton field force keeping contact with his accounts.

4. *Less circus and more service.* Parades, wild parties, all-expenses-paid conventions, cruises, banquets, and picnics cost money, and plenty of it. And distributors have learned that whereas throwing a big party for dealers may stimulate sales for a few weeks afterward, the letdown is terrific. Also, the dealers begin to reason: "If he can throw around all that dough on roast turkey and floor shows, he surely could do a little more for me in the way of an advertising allowance."

## They'll Do It Every Time . . . By Jimmie Hatlo



A NICE DEAL IN THE BAG  
AND ALONG COMES  
MAMA - THEY'LL DO IT  
EVERY TIME

THANK TO C. L. PAULE  
BURLINGTON, IA

By following each of these lines of reorganization to its logical conclusion, the distributor inevitably finds himself with fewer people on the payroll, less office space to rent, less to pay for tools and equipment and supplies—and, perhaps most important—fewer headaches.

The streamlining of his organization has enabled him to know it better, to watch it more carefully, and to keep it out of jams. That goes for his relations with his accounts, also. So, somewhat relieved of the strain induced by a big overhead and an expansive operation, the distributorship head can concentrate on moving merchandise, and moving it profitably.

## LETTERS

### Wholesalers Get Ready For Coming Trend

National Electrical Wholesalers Association  
165 Broadway  
New York, N. Y.

Editor:

Your editorial in the October issue—"Wholesalers vs. Distributors in 1940" has been read with great interest. You are, of course, correct in your statement that the National Electrical Wholesalers Association is principally composed of concerns wholesaling electrical supplies.

In recent years, however, the distribution of major appliances has become of growing importance to our members. This year the association came to the conclusion that it would be of mutual benefit if arrangements could be made to admit appliance distributors as members of this association.

To this end, our by-laws were amended and we are now proceeding with plans to set up a bureau or section within the association to treat with the problems of distribution faced by appliance wholesalers.

We look forward to the consummation of this plan for

"Wholesalers and Distributors in 1940."

E. DONALD TOLLES,  
Managing Director

### Chris Steenstrup Plans To Attend Reunion

General Electric Co.  
Schenectady, N. Y.

Editor:

I thank you for yours of Oct. 23 inviting me to attend an "Old Timers Reunion" in Detroit on Monday, Nov. 20.

I have been a little under the weather and for this reason have not answered your invitation earlier. I feel, however, that such a meeting

would be very interesting, and I would like to attend.

Therefore, unless something unforeseen happens, I plan to be there. With this in mind, will you please inform me where the gathering is to be held, and also whether the dinner will be formal or informal. You understand, of course, in either case it makes no difference, but I would like to know.

C. STEENSTRUP

Answer: The "Old-Timers Reunion" at the home of the News, 5229 Cass Ave., will be informal and unparliamentary. However, an effort will be made to preserve order.

### Delco-Frigidaire Scores Ten Strike In Dallas

Joe Hoppe, Inc.  
Frigidaire Commercial Sales and Engineering  
4102 Live Oak St.  
Dallas, Tex.

Oct. 23, 1939

Editor:

We wish to call your attention to an article which is in error in your Aug. 16 issue, page 5, with the title "Air Cooled Texas Alleys Getting a Big Play." This article states that the Air Conditioning system installed in General Electric manufacture, while in reality it is a Delco-Frigidaire summer and winter conditioning system.

The Delco-Frigidaire system installed by Joe Hoppe, Inc. contractors, is a summer and winter job using what is known as "Spot or Sectionalized" conditioning. In other words, only the portion of the Bowling Alley occupied by the bowlers and the spectators is conditioned. By using this type system a 35-ton job obtains excellent results; whereas a much larger system would have been required had the whole building been conditioned.

The large air-conditioning unit, the duct type heating units, and the evaporative condensers are all located on a balcony in the attic especially designed and provided. The air-conditioning refrigeration compressors and the electrical controls and switch board are located in the equipment room inside the building.

All of the air distribution ducts are located in the attic and are cork insulated. Venturi-Flo spun aluminum ceiling air distribution outlets were used throughout and perfect results have been obtained.

The system is, of course, entirely automatic for both summer and winter operation.

We trust that you will make a correction on the above.

J. L. CASSELL, Chief Engineer

### Isn't This an Age of Miracles?

Hubbell Corp.  
1315 Carroll Ave., Chicago, Ill.  
Oct. 27, 1939

Editor:

Ain't Nature Grand? From page 5 we learn that a Mills 5-hp. compressor, a Temprite constant pressure valve, a Cherry-Burrell aerator, and an Automatic Products expansion valve are cooling 250 gallons of milk

per hour on the refrigerated section from 80 to 38°.

250 gal. x 8.33 lbs. x 42° = 7.25 tons.

12,000 B.t.u.

Why not call this the "Merlin" assembly?

You guess why.

We still think you have a swell paper, but aren't some of your boys gullible?

R. H. HUBBELL

(Note: Merlin was the magician in King Arthur's Court—Editor.)

### Permission To Reprint Is Limited

J. J. Berliner & Staff  
225 Fifth Ave.  
New York

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We would appreciate your cooperation very much in this matter, and would be glad to reciprocate in like manner.

J. J. BERLINER,  
Managing Director

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In most cases we are pleased to grant permission to reprint specific news articles with credit to the News, but it frequently happens that technical material is published subject to agreements with authors, including royalty payments on matter reproduced in book form.

We maintain a relatively large staff and practically all matter published in the News represents original copy. It is necessary for use to protect our rights in order to get an adequate return on our investment in service.

### Mr. Beck Doesn't Want It To Happen Again

c/o Postal Staff  
Yorkton, Sask.

Oct. 24, 1939

Sirs:

About six weeks ago I sent you a card stating that Wm. Beck of "Beck's Electric" had refused your publication.

I now discover that it was a purely advertising periodical which has a name very similar to your paper which Mr. Beck refused. He is anxious to continue receiving AIR CONDITIONING & REFRIGERATION NEWS.

Would you please continue to send your valuable journal to Beck's Electric, Third Ave. South, Yorkton, Sask. and oblige.

FRANK SHARP,  
Letter Carrier



# Service Methods

## Service Analyzer For Commercial Refrigeration & Air Conditioning

Service Complaints Can Be Classified Where  
Thermostatic Expansion Valve Is At Fault

By the Engineering Department of The Detroit Lubricator Co.

What would you say is the difference between a refrigeration service engineer and a service mechanic? Wouldn't you agree that the service engineer is somewhat like a trained physician who is capable of diagnosing the ills and ailments of his patient's system?

A service mechanic may be highly skilled at making installations and in doing actual service work, but if he is not capable of diagnosing trouble he may do more harm than good.

There are generally five steps which you should take in rendering efficient service:

### 1. Listen To the Complaint

There is a definite reason why you were called on the job. The customer may think the machine is running too long or giving improper refrigeration. Determine how long the trouble has existed and if it came on slowly or gradually. Don't be afraid to ask questions. The customer is usually pleased to know you are really interested in his complaint. Find out everything you can concerning the complaint.

### 2. Analyze the Complaint

Is the trouble due to improper design of the equipment, to misuse, or to something that has recently occurred? Changes in weather or service load may be showing up a design defect which has always existed. Check the things complained about to see that they actually exist.

### 3. Check the Operation Of the System

Put on gauges, and if necessary, use thermometers. Feel liquid line, suction line, and evaporator. Keep your eyes open for any sort of unexpected symptom.

Is the evaporator completely refrigerated? Is the suction line cold due to refrigerant flooding back? Is there sufficient refrigerant? Has the airflow over the evaporator been obstructed? Is the motor cool showing that it has been running light or hot from hard work?

### 4. Analyze the Symptoms

Think of all the possible things that might cause the trouble. The following paragraphs and the service chart will help. Whatever you do, don't go at the job with any fixed notions. Your trouble may be caused by any one of a number of things and it is your business to find which one is at fault. A doctor who removed the appendix every time his patient had a pain in the stomach wouldn't be any worse than the service man who removes the expansion valve every time the suction pressure is wrong.

How many things can you list that will cause high suction pressure or low suction pressure? It would be wise to have such a list handy at all times.

### 5. Correct the Trouble

After you have found a fault and corrected it, make a further check to be sure no additional faults exist. It is not uncommon to find several faults at one time, as for instance, shortage of refrigerant, leaking compressor valves, and expansion valves out of adjustment. If for any reason you have tampered with the expansion valve adjustment and then found other faults, be sure and readjust the expansion valve back to its proper setting.

### Description and Use Of the Service Chart

Probably no list or chart will ever cover all the things that can go wrong with refrigerating systems. The following paragraphs and the "Genuine Detroit" service chart contain practical information based on actual field service. These are not theoretical faults—they have occurred many times in the field.

Air conditioning and commercial systems using thermostatic expansion valves and pressure controls are basically the same as far as the refrigeration cycle is concerned and will develop similar symptoms in case of trouble. Therefore, the service chart applies equally as well in either case.

The column under "Transient Faults" indicates things that go wrong due to failure of equipment. Those listed under "Design Faults" are due to incorrect design or installation. If a system has been operating correctly for a long period then gives trouble it is likely due to a transient fault; however, change in weather or load condition may show up a design fault that has always existed.

After each transient fault and after each design fault is a key number which refers to one of the following paragraphs describing the particular type of fault.

The following paragraphs and chart are particularly for commercial systems using thermostatic expansion valves and controlled by a pressure switch:

#### 1. Shortage of Refrigerant

A shortage of refrigerant may cause unusual effects depending on other circumstances. On commercial jobs controlled by a pressure switch a slight shortage usually causes the machine to run too long and results in temperatures being colder than normal. However, if the expansion valve is not sufficiently oversized to pass the uncondensed gas the result is a slightly starved evaporator.

Thus, a slight shortage may pass unnoticed except for a higher power bill. A real shortage, of course, causes loss of refrigeration along with either high or low suction pressure, depending on whether the liquid line and the expansion valve are sufficiently oversized to pass the uncondensed gas.

Shortage of refrigerant can be

## Chart For Air Conditioning and Commercial Systems Using Thermostatic Expansion Valves & Controlled By Pressure Switch

SYMPTOMS					PROBABLE FAULT			
Condition of Job	Evaporator Condition	Running Time	Suction Pressure	Suction Line Temp.	Transient Faults (Failure of Equipment)	Key to Paragraphs	Design Faults (Incorrect Design or Installation)	Key to Paragraphs
Warm	Warm	Won't start	Low	Warm	Complete loss of charge.....	1	Compressor located in cold place .....	14
					Strainer or liquid line clogged..	5		
					Expansion valve lost charge....	8		
					Expansion valve badly out of adjustment .....	10		
Warm	Warm	Continuous	High	Warm or normal	Shortage of refrigerant.....	1	Compressor too small....	15
					Too much refrigerant.....	2		
					Compressor valves leak.....	3		
					Condenser obstructed .....	4		
Warm	Warm	Short cycles or won't start	Low	Normal or cold	Suction line restricted.....	17		
Warm or normal	Starved or partly refrigerated	Short cycles	Low	Warm	Shortage of refrigerant.....	1	Loss in liquid head.....	6
					Strainer or liquid line clogged..	5	Bulb in wrong location..	11
					Expansion valve frozen.....	7	Valve in wrong location..	9
					Expansion valve out of adjustment .....	10	Liquid line too small....	5
					Expansion valve lost charge....	8	Compressor located in cold place .....	14
Warm	Cold	Short cycles	Low	Normal or cold	Air flow over evaporator obstructed .....	13	Evaporator too small....	13
							Evaporator surges .....	16
Normal or cold	Flooded	Too long	Normal or high	Flooded	Expansion valve out of adjustment .....	10	Bulb in wrong location..	11
					Expansion valve frozen.....	7	Insufficient drier loop....	11
					Feeler bulb in poor contact....	11		
					Expansion valve leaks.....	12		
Normal or too cold	Cold	Continuous or too long	Normal or low	Normal	Shortage of refrigerant.....	1	Compressor too small....	15
					Too much refrigerant.....	2		
					Compressor valves leak.....	3		
					Condenser obstructed .....	4		

detected by:

A. Liquid line warmer than normal, especially where it enters expansion valve.

B. Head pressure lower than normal. This is not always a dependable indication unless you happen to know what the pressure is supposed to be.

C. Distinct hissing sound at the expansion valve.

D. Sight glasses are the one sure way of detection.

#### 2. Excess Refrigerant

Excess refrigerant increases head pressure and reduces compressor capacity causing long operation and possibly warm evaporator. May cause damage to motor if it is not properly protected by overload cut-out.

Non-condensable gas in the system may cause this same condition. After blowing out non-condensable gas check for shortage of refrigerant.

Detection:

A. High head pressure.

B. High temperature at compressor discharge, with cold condenser and receiver.

#### 3. Leaking Compressor Valves

Leaking compressor valves cause excessive running time. A slight leak may cause temperatures lower than normal—a bad leak higher than normal.

Detection:

A. When turned over by hand compressor feels weak.

B. When discharge shut-off valve is closed if pressure decreases quickly it indicates leaking discharge valves.

C. Single cylinder compressors will not pump low vacuum and multiple cylinder compressors will not pump vacuum as quickly as usual.

D. Head pressure may be low.

#### 4. Condenser Obstructed

On commercial jobs and especially unit systems such as ice cream cabinets, the flow of air over the condenser may be obstructed by merchandise stacked around the cabinet. The condenser should be cleaned occasionally to remove dirt accumulation. In certain localities water-cooled condensers must be periodically cleaned.

#### 5. Strainer Clogged

Causes starved evaporator and low suction pressure. If strainer is at

the condensing unit the liquid line will be cold, due to restriction in strainer. This condition also shows up if liquid line is too small or obstructed.

Detection:

A. Feel liquid line beyond line strainer to make sure it is not being cooled by pre-expansion.

B. Install gauge in liquid line just ahead of valve and observe actual liquid pressure at valve.

C. Check strainer in valve body to make certain it is clear.

#### 6. Loss of Liquid Head

When the evaporator is located several floors above the compressor there is a drop in pressure in the liquid line due to the weight of the column of liquid. This pressure loss amounts to 10 lbs. for each 18 feet head of "Freon," 17 feet head of SO<sub>2</sub>, and 26 feet head of methyl chloride.

On water-cooled machines where head pressure is usually kept low or on air-cooled machines in cold places the loss in head may retard flow of refrigerant to the evaporator. The result will be low suction pressure and possible starving of evaporator.

Detection:

A. Calculate loss in head using known height of evaporators above compressor and figures given above for various refrigerants.

B. Feel liquid line and observe any tendency to become cold as height increases. This condition may also be caused by undersize liquid line.

C. There is likely to be a hissing sound at expansion valve similar to obstructed liquid line or shortage of charge.

(To Be Continued)

### Philco Transfers Its Service Headquarters

PHILADELPHIA—Parts and service headquarters for Philco Conservador electric refrigerators have been transferred from Indianapolis to general Philco headquarters here, reports Robert F. Herr, manager of the parts and service division.

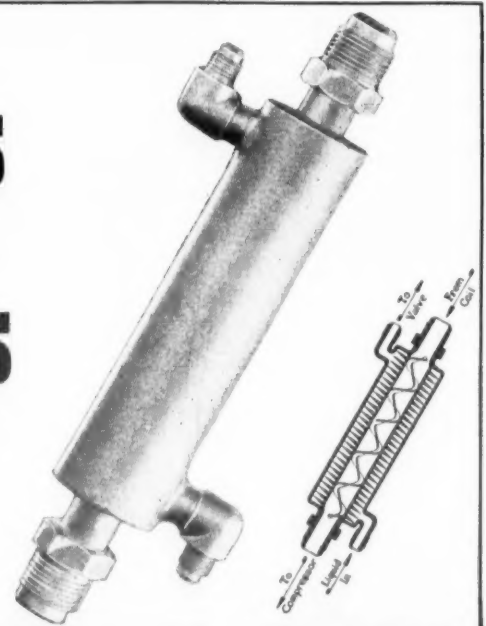
Mr. Herr also reports that the company has made another special arrangement with Utilities Engineering Institute for those service men who are interested in more training in the air conditioning and refrigeration fields.

## PEERLESS Capacity BOOSTERS

CUTS RUNNING TIME of compressor by giving BETTER COIL EFFICIENCY.

A necessity on every coil installation.

10 sizes for installations from 3,000 to 600,000 B.T.U. per hour.



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# 'LET'S FACE THE FACTS ON MERCHANDISING QUICK FROZEN FOODS'

## 'Quick Frozen Foods Are a Natural For Distribution' In Ice Cream Industry

An Address by Charles Q. Sherman, President, Charles Q. Sherman Corp., New York, at the 39th Annual Convention of the International Association of Ice Cream Manufacturers at San Francisco, October 24th, 1939

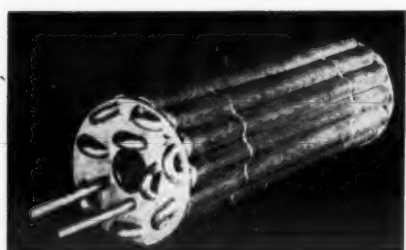
I am going to briefly outline to you why quick-frozen foods are with us, and what they are, and what is its future. In the horse and buggy days, if you please, we were in a position to get real fresh fruit and vegetables, either from our own little back yard gardens, or that of a garden near us, and we used a food nature had ripened with all its goodness, full of flavor and vitamins.

In those days we did not have to carry around with us all sorts of pills for indigestion, heartburn, constipation, etc. because in the natural ripening of fruits or vegetables, nature has provided the agencies essential to fight or resist the germs that cause the many minor ailments that in later life become major ones.

### City Life Responsible For Frozen Foods

As our cities grew and thus moved far away from the source of gardens where it became almost impossible to secure real fresh fruit and vegetables, vine or tree nature ripened, and when you think that it is often as much as from three to ten days after picking that they reach the markets, and due to long shipping problems such items are necessarily picked pre-ripe and before nature has put its finishing touch with flavor and the necessary vitamins, meant that the major portion of our population were not any longer able to get the natural food products intended for us to have: Thus quick-frozen foods to the rescue.

### No Joints! No Leaks!



This Rome Jointless Water Cooled Condenser is a typical example of Rome's ability to provide trouble free condensing equipment. Rome Water Cooled Condensers are used by many leading compressor manufacturers. Write for complete information.

### ROME-TURNEY RADIATOR COMPANY

222 Canal Street  
ROME, N. Y.

### Anaconda Copper Refrigeration Tubes

Unusually soft!



THE AMERICAN BRASS CO.  
FRENCH SMALL TUBE BRANCH  
General Offices, Waterbury, Conn.

Today every home in America, whether it be in crowded New York or desert section, can have a garden in their kitchen. Quick-frozen foods are carefully selected from the proper seed, in proper soil, grown and selected nature ripened with all its natural flavor and vitamins quickly frozen after picking, sealing the flavor and juices in, and thus retaining these flavors and juices till it reaches the table in your home, hotel, restaurant, institution, etc.

### Quick Freezing Retains Nature's Work

Quick freezing does not add anything to the foods, all it claims to do is retain nature's work. Let's, for an example, take an ear of corn, three to four hours after it is taken off the stalk, the sugar in the corn and its flavor starts to vanish, so that when you get it into your home all its goodness has been extracted by the air reaching it; think what you're eating if it takes several days, not several hours, to get this corn to you for consumption. Not so with quick freezing, this same corn would be quickly frozen by this new development direct from field to plant before the sugars and flavors had a chance to get away in thin air, thus retaining the same flavor nature put into it till it reaches you for consumption, and so the same is true of peas, beans, strawberries, peaches, etc. Quick freezing retains the flavor and vitamins of the items frozen with this new process.

Are quick-frozen foods economical you ask? I say absolutely so in about eight to nine months of the year, when the market is not glutted with them in summer months. When you buy quick-frozen foods you buy and use all you get, there is no loss, or waste, as an example a 12-ounce package of quick-frozen peas is equal to from 2 to 2½ lbs. of peas in the pod, 63% waste eliminated and cost less, and is uniform in size, and are full in flavor, and eliminates the work and time of shelling, cooks in half the time the so-called fresh peas take to cook, the reason for that is that quick freezing tenderizes the foods.

### A 'Natural' For Ice Cream Men

Why should the ice cream manufacturer be interested in quick-frozen foods? Because quick-frozen foods are a natural for distribution by your industry, and the reasons for this statement are many. First, the volume sale of quick-frozen foods

are heaviest when ice cream sales taper off. By September when the season's pack and freeze are completed and ready for the market, the surplus supply of fresh products are about cleaned up and ice cream sales start dropping.

### Will End Seasonal Let-Downs

Your industry has long sought some way to level off your seasonal trends. Shortly after Labor Day you commence retrenching, your hardening rooms are curtailed, trucks put away, salesmen laid off waiting for the good old hot weather to come around again next year. With quick-frozen foods these hardening rooms can be used for storing these foods, trucks can be used for delivering, as the same temperatures are required for one as the other. Salesmen and merchandising men can be pressed into service opening retail food outlets for the sale of quick-frozen fruits, vegetables, fish, seafoods, poultry, etc.

Quick-frozen foods sales start slumping when the ice cream season opens up again, and thus by your distributing these foods you will level out your seasonal problems. Frozen foods can also and should be sold to drug stores where luncheons or foods are served, as certainly a drug store has little if any facilities to clean and prepare vegetables and certain fruits, while frozen foods are in handy package form in sizes from 12 ounces to 5 lbs. ready for instant use, no waste or fuss, and it further makes it possible for the luncheonette shop to not over estimate or under estimate his food preparations; if they see that they are running short of a vegetable, a package taken out of his cabinet poured into the pot and a few minutes it's ready to be served.

How you should merchandise quick-frozen foods? The best type of outlet is the grocer or meat dealer catering to the average wage earning element, as it is this type of housewife who seeks and needs the economies with her food dollar she has to spend, and not make a bee line for the few stores that cater to the wealthy, they will follow anyway. It's the average type food dealer that will give you better distribution.

### Sell Staples Only To Start With

Sell staples only to start with. Do not load a retailer up with slow moving items, sell him items of a staple character that will move quickly and in volume. The retailer will thus make money, and so will you. What are staples? In each section certain items might be staples, while not in others, so I will mention a few of what I'd call staples, such as peas, beans, spinach, asparagus, broccoli, brussels sprouts, strawberries, raspberries, peaches, fish, seafoods, poultry, and orange juice. Should you happen to find that a certain item does not move by your retailer, I'd suggest removing it and replacing with one that does, as long as he has kept it in proper temperature equipment, it is just as good as if it were in your warehouse.

Frozen foods must be displayed to be sold in volume. This new food development is so new to the consumer that many of them as yet do

not realize how natural these foods look and appear. If hidden in blind storage cabinets and left alone to be sold will result in poor sales and discouraged retailers. The retailer has not the time to stop every customer entering his store, go to the cabinet and open up a package of frozen food and give the customer a sales talk. He has too many items that sell to waste his time on things that don't.

People buy on impulse, on what they see and appeals to them. By displaying frozen foods you can also display with it packaged ice cream, cakes, novelties, molds, etc. as a suggestive dessert to go with other foods. Ice cream can and will and should be sold in food stores to be taken home for desserts.

### Daily Suggestive Meal Best

The best method of displaying frozen foods is by a daily suggestive meal. One day a fish dinner with frozen fish, seafoods, two vegetables, a fruit, and a brick of ice cream, another day a poultry, steak, meat, vegetarian dinner suggestion, and always ice cream as a dessert.

As an illustration, 77% of meals served in hotels and restaurants are served the regular meal suggestions, and the others order individual items. The same can be done in frozen foods. If the customer does not care for the dinner suggestion, she has before her a list of other items available. You will be surprised how many combination sales will be made, thus increasing sales for the retailer and yourself as a distributor.

Any ice cream manufacturer going into the distribution of frozen foods who thinks it will be an outlet for his old or surplus cabinets is better off to stay out of frozen foods distribution. Equipment to sell frozen foods must be designed not only to attractively display them, but must also be practical for storing and quick service to the trade. My experience has convinced me that the proper way to consider equipment for the retailer is by a small display case to start with, and when the retailer starts to outgrow his case, then to sell him a large cabinet to be placed in the back room or basement for his surplus storage, and feed his display case from it.

### Don't Give or Loan Equipment

Don't start giving, or loaning equipment. I say this not without serious study and survey of these problems. The grocer, butcher, and delicatessen store who will be your retail outlets, have always bought their own equipment for meat, dairy, delicatessen cases, scales, registers, pays for his own fronts, and has not been in the habit of getting something loaned or given him, so don't start with him as you did to your sorrow with the ice cream development. If you do, God help you, as there are over a half-million potential frozen food outlets.

What I do recommend is that you use your buying power to get the right type of equipment for your retailers at the lowest possible cost, and sell it to him at the easiest possible terms and charge a finance charge on unpaid balances, and sell the paper to a finance company whose business it is to make collections.

Don't finance yourself; let that be handled by those whose business it is, and you stay clear of it and build your food business. The retailer will pay the finance firm quicker than he will you, because you are married to him, you're seeing and selling him, and thus you become too familiar with him. This advice is sound

for  
**BETTER SERVICE**  
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WEST NORFOLK, VA.

because firms as big as you are have learned that their business is served best by selling, and letting others do the collecting for equipment sales.

### Insurance Against Spoilage Advisable

Insurance. I recommend that every piece of equipment installed for frozen foods carry an insurance policy against spoilage of foods as the result of mechanical breakdown that results in the defrosting of the foods, the reason for that if quick-frozen foods are once defrosted, and re-frozen again, they then become cold storage foods, and the flavor has been lost in re-freezing, and should a consumer purchase such foods she will not likely want to buy any more frozen foods. I suggest with this type of insurance policy that when a retailer reports that he has had a mechanical breakdown and the foods were defrosted, to take out such foods that are defrosted and replace with new foods, and the insurance company will pay you for the foods thus replaced. Such a policy can be had for as low as \$2.50 per year and insure losses up to \$225 annually. I will gladly give further information on this insurance to those interested.

### Retailer Should Get Profit of 25%

Retailer's profit. It is necessary to see that a retailer has a gross profit margin of at least 25% on cost of the foods to him, which is reasonable and he is satisfied with this margin.

How to obtain a line of frozen foods to distribute. There are several firms in this business who make it their business to assemble lines of frozen foods packed for them under one label under their supervision, and who will furnish you a complete line of foods, assist with merchandising helps, signs, menus, sales helps, etc. and you don't have to buy in large quantities, or if you are big enough, you can deal direct with packers; who will pack under your own label, or furnish you their own standard label.

While you will buy for less from the packer direct, you will have to do your supplying of literature, promotion, etc. and it is not always practical to buy in small lots direct from packers, as like from the first source I suggested before, this depends a great deal how extensive an operation you have, and I shall be only too glad to assist in the advice of anyone interested, and assist in surveying your problem without any obligation whatever.

The normal margin a distributor should work on is about 20%. This may sound small to you ice cream men, but when you stop to consider that once frozen foods start selling and are generally accepted by the public in volume that the turnover will be many times greater than ice cream sales. I further believe and am convinced that at that time the frozen foods sales will carry their own share of the overhead burden, thus making it then possible to reduce materially the price of ice cream, and eliminate to a large degree private homemaking plants, increase the consumption of ice cream as well, which you will do anyway when the food stores once start selling ice cream.

### Storage Compartment In Household Box

To show you the advance trends being made in the frozen food field, a national manufacturer of domestic refrigerators has recently announced a domestic ice box with a special compartment to accommodate frozen foods at zero temperature, and this will mean that ice cream can be held in the same compartment. I am advised that other national manufacturers are ready to announce such a home unit shortly.

In conclusion let me say to you, ladies and gentlemen, that you could have wished for nothing better to level off your seasonable slumps than the quick-frozen food baby. Don't abuse it. It needs you, and you need it. Take it into your plans, nurse it to maturity, then enjoy the profits from your efforts. Thank you.

### Copies of Air Conditioning & Refrigeration News Bound for Reference Use

Copies of Air Conditioning & Refrigeration News (formerly Electric Refrigeration News) for the past seven years are available in bound books. These volumes, each covering a four-month period, are bound in a stiff paper board cover or in black imitation leather. Prices: \$3.00 each for paper binding or \$5.00 each for imitation leather, f.o.b. Detroit.

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Vol. 11—Jan. 3 to April 25, 1934.  
Vol. 12—May 2 to Aug. 29, 1934.  
Vol. 13—Sept. 5 to Dec. 26, 1934.  
Vol. 14—Jan. 2 to April 24, 1935.  
Vol. 15—May 1 to Aug. 28, 1935.  
Vol. 16—Sept. 4 to Dec. 25, 1935.

Vol. 17—Jan. 1 to April 29, 1936.  
Vol. 18—May 6 to Aug. 26, 1936.  
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Vol. 20—Jan. 6 to April 28, 1937.  
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Vol. 23—Jan. 5 to April 27, 1938.  
Vol. 24—May 4 to Aug. 31, 1938.  
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## Distributor-Dealer Doings

### College-Taught Appliance Salesmen Divide Training Between Classroom & Sales Floor

LOS ANGELES—Appliance salesmen, college taught, soon will be available to distributors and dealers in this territory as the result of an unusual program of training developed by the Electrical Development League of Southern California in cooperation with Los Angeles City College.

Designed for junior college students between the ages of 20 and 25, aim of the course is to attract new blood into the appliance sales field, and at the same time to see that these men are trained so that they can start out as full-line producers, their apprentice days past. Federal, state, and local cooperation in making funds available for employment training in the distributive occupations has made the course possible. First full two-year course is starting this fall, after a 14-week "try-out" last spring in which seven selected engineering and merchandising students, at that time jobless, were put through a program of combined classroom and salesroom work, testing out the "fourth semester" of the proposed appliance selling curriculum.

All seven of the "try-out" students were placed in permanent positions with dealers after completing the training.

Instructors in the test course were members of the electrical industry, including E. C. Adams and Walter L. Stickle of the Electrical Development League, and J. J. Stigman, Vernon Sheblak, J. W. Doan, T. H. Shepherd, Frank A. Hansen, L. A. Politowski, G. G. Vanhorne, Fred Hagerman, Walter Hertzog, E. G. Alberts, W. W. Pearce, L. E. Mozelle, A. C. Hall, A. J. Hartman, C. W. Preston, and W. D. Hostetler.

Subjects covered included refrigeration, ranges, gas vs. electricity, water heaters, wiring, home lighting, commercial lighting, kitchen planning, electric heating, air conditioning, commercial cooking, as well as sales methods, financing plans, small appliances, and laundry equipment.

The "test students" spent the morning at the City College and the sales training rooms of the League in preparing for discussing their work in the business firms, in which they received practical training. They spent the afternoons and Saturdays working for these firms.

This "cooperative training" is an important part of the training course, as set up in the original curriculum decided upon in advance of the test course. The student is assigned to some electrical equipment company in Los Angeles, where he has a chance to observe the principles learned in the classroom in practical operation, and can acquaint himself with some of the sales and technical points used in their performance.

For this "field work," the student receives an hourly rate of pay, plus college credit. Young men with the following characteristics are sought as students: (1) pleasing personality; (2) ability to mix well with people; (3) a mature and serious attitude toward life; (4) mechanical mindedness and manual dexterity (if possible, although lack of these is no bar to entry); (5) a specific interest in electricity and its application to mechanical equipment.

Complete two-year curriculum set up for the course is as follows:

First Year—first semester: English; accounting; advertising; business mathematics; economics of marketing; modern thought and expression; physical education.

Second semester: Public speaking; typing; retail merchandising; electricity; psychology.

Second Year—first semester: Salesmanship; electricity; political science;

health; cooperative work; physical education; electives.

Second semester: Technique of electrical equipment salesmanship; operation and demonstration of electrical equipment; electrical servicing; cooperative field work; physical education.

It will be noticed that under this curriculum, "cooperative field work" is to start the second semester. A plan has been worked out whereby this would include nine hours of work per week in each of the second and third semesters, and 21 hours per week in the fourth semester. The "test course" was designed to try out the practicability of this latter arrangement.

As the result of this try-out course, the following suggested outline has been prepared for this fall's course in electrical equipment merchandising:

A. Fundamental knowledge of direct and alternating current: 1. voltage; 2. amperage; 3. wattage; 4. Ohm's law; 5. power formula.

B. Motors: 1. Universal motors as used in vacuum cleaners, etc. 2. fractional horsepower motors as used in domestic refrigerators, etc.

C. Heating elements for: 1. range; 2. water heaters; 3. space heaters.

D. Automatic control devices.

E. Knowledge of minor electrical repairing.

F. Fundamentals of construction of ordinary domestic electric meters, how to read them, and how to calculate bills.

G. Fundamental knowledge of connecting and operation of major electrical appliances: 1. electric range; 2. electric water heater; 3. refrigerator; 4. washing machine; 5. ironing machine; 6. waste disposal unit; 7. dishwasher; 8. vacuum cleaner.

H. House wiring: 1. elementary knowledge of local code requirements; 2. wire size and load carrying capacities; 3. switches, fuses, etc. 4. reading, wire plans, and symbols.

I. Kitchen planning.

J. Illumination: 1. different types of illumination and advantages of each; 2. use of light meters; 3. proper placement of fixtures.

K. Electric heating: 1. different types of electric heaters; 2. proper placement and proper sizing of heaters; 3. insulation.

L. Air conditioning (very brief).

#### Hardy Made Wesco Branch Manager At Jacksonville

JACKSONVILLE, Fla. — L. G. Hardy, former zone manager for the merchandising division of Westinghouse Electric & Mfg. Co. at Atlanta, has been appointed Jacksonville branch manager of Westinghouse Electric Supply Co. The local branch takes in the north Florida and south Georgia territory.

Mr. Hardy has been with the Westinghouse organization for six years. He succeeds R. P. Smith, who has been transferred to Atlanta as district apparatus and supply manager for Westinghouse Electric Supply.

#### Walther Co. Opens Office, Display Rooms In Ala.

MONTGOMERY, Ala.—New Montgomery office and display rooms of Walther Bros., Inc., was opened on Oct. 26. The store will handle the entire Philco line of appliances including Conservators and York Cool-Wave conditioners. J. P. Walther is district manager for the firm. Home office is in New Orleans.

### McCarthy Leaves Eureka To Join Bendix

SOUTH BEND, Ind.—A. L. McCarthy, since 1919 vice president in charge of sales for Eureka Vacuum Cleaner Co., has resigned that position to become manager of branch and resale operations for Bendix Home Appliances, Inc.

Mr. McCarthy is best known for his work in creating and building national sales organizations and training them in specialized selling technique. He also is known in the appliance field for the sales clinics which he has conducted and before which he has lectured. It is understood that his work with Bendix will follow along these same general lines.

### Gulfport Auto-Lec Store Moves —Increases Floor Space 50%

GULFPORT, Miss.—The Gulfport Auto-Lec Store, a unit of the chain retail outlet for Crosley appliances in Louisiana, Mississippi, and South Alabama, has moved into larger quarters at 1410 25th St. Floor space has been increased 50%.

### New Stoker Distributors

BIRMINGHAM, Ala.—Two new stoker distributors recently have been appointed here. Badham Insulation Co. will distribute Link-Belt's complete line in Alabama, and M. F. Smith of Building Equipment Co., Inc. has the distributor's franchise on the Winkler stoker line.

### 27 Krich-Radisco Men Get Kelvinator Diplomas

NEWARK, N. J.—Twenty-seven members of the selling force of Krich-Radisco, Inc., Kelvinator distributor here, have been graduated from National Salesmen's Institute, Kelvinator-sponsored course of home study in appliance merchandising.

Members of the Krich-Radisco selling organization who graduated from the school were:

Benjamin Neutra, Jersey City; Lloyd Depkins, Elizabeth; Ernest Reinhold, Union City; Vincent O. Umstot, Newark; B. Goode, Newark; Art Bundy, Perth Amboy; Walter Reeves, Jersey City; Edward F. Stony, Asbury Park; Wm. E. Lawson, Jr., Springfield; Cecil Forrest, East Orange; Alex Tobin, Perth Amboy; Hoyt S. Pye, Newark; George Dirlam, Verona.

Sam Bruskin, Englewood, Wm. Friedhoff, Holdson; Joseph Agoatino, Newark; Edward M. Meissner, Jersey City; Anthony Del Sapio, North Arlington; John Reilly, Harrison; H. M. Osmun, Hackettstown; Joseph A. Nevins, West Orange; Arthur O. Tewes, Irvington; Robert Mersereau, Scotch Plains; Andrew K. Leach, East Orange; H. Waldman, Newark; and Willy Philips, Jersey City.

### Roos To Service Universal

DALLAS, Tex.—Roos Electric Co., dealer for Universal appliances in the Highland Park shopping district here, has been appointed authorized service dealer for these appliances in this area.

### Salesman Skips Saturday 'Half-Holiday'—Ups Sales

AMERICUS, Ga.—The Saturday "half-holiday" custom doesn't apply to H. L. "Buck" Howell, district salesman for Georgia Power Co. here, who finds it the best day of the week on which to close sales.

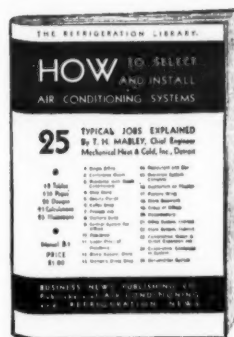
On a recent Saturday, Mr. Howell sold eight major appliances for a total of \$934.25. His sales included two refrigerators, four ranges, and two water heaters.

### G-E Supply Erects New Building In Jackson

JACKSON, Miss.—General Electric Supply Corp. has completed erection of a new building in downtown Jackson, where a sales office, display rooms, and a warehouse will be under the management of B. W. Billingsley. The new facilities will serve the Jackson area under direction of the New Orleans office.

### Mrs. Rhea Appointed Home Economist At Omaha Store

OMAHA, Neb.—Mrs. Margaret Danielson Rhea is the new home service advisor for the Major Appliance Co. here. She will conduct cooking schools and electric range demonstrations in towns served by the company. She was formerly associated with the home service department of Nebraska Power Co.



### 25 Typical Jobs Explained

1. Single Office
2. Conference Room
3. Residence with Room Conditioners
4. Shoe Store
5. Beauty Parlor
6. Coffee Shop
7. Process Job
8. Doctor's Suite
9. Central System for Offices
10. Residence
11. Upper Floor of Residence
12. Men's Apparel Store
13. Women's Dress Shop
14. Restaurant and Bar
15. Residence System Complete
16. Auditorium or Theater
17. Factory Wing
18. Store Basement
19. Group of Offices
20. Haberdashery
21. Office System, Indirect
22. Store System, Indirect
23. Combination Water & Direct Expansion Job
24. Evaporative Condenser in System
25. Dehumidifier System

## "How to Select and Install Air Conditioning Systems"

By T. H. Mabley

A Book For the Air Conditioning Dealer and Contractor

"HOW to Select and Install Air Conditioning Systems" was written by T. H. Mabley, chief engineer, Mechanical Heat & Cold, Inc., Detroit, Mich., and consists of 25 "case histories" of installations engineered by Mr. Mabley in his regular work as chief engineer for a large Detroit air-conditioning distributor. This manual thus has a practical, everyday value to any individual who has any part in the estimating, engineering, and installation of air-conditioning equipment.

Descriptions of the various "cases" start with the more simple installations such as a single office and continue on through to more complicated jobs, such as process work and the air conditioning of auditoriums and department stores.

Methods are given for calculating heat gain and heat loss for each job, determining design conditions, selecting equipment, and locating and installing equipment. Both direct and indirect systems were used in these typical installations, and the advantages and disadvantages of each method are given.

While all the fundamental functions of air conditioning are desirable, there are certain applications and conditions where some of the functions are not considered necessary, nor economical to install and operate. High relative humidity, such as may be obtained with winter humidification might cause show windows in a store to cloud up, thus impairing the display. For such an application the summer functions are purchased and winter humidification is omitted. In a process job all of the functions may be utilized as the air-conditioning equipment is required to maintain predetermined year-around temperature and humidity within close limits. Both of these cases are explained in the manual.

Air conditioning an auditorium where large crowds of people will be present for two or three-hour periods has its particular problem, while the design limits for a department store with its heavy electric light load require expert attention. All of these and other factors that must be considered are discussed for the individual application, and the selection of equipment is based upon the load calculations for predetermined design conditions.

The procedure followed on these 25 typical jobs may be studied by the contractor, dealer, engineer, etc., with tangible benefits in the saving of time and prevention of mistakes.

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Whether your requirements are large or small, standard or special, Servel engineers can help you solve your most vexing problems of commercial refrigeration or air conditioning. Write today to Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Ind.





## Profitable Sales Ideas

### Parlays 'Two-Bit' Down Payment Into Big Sales

TOPEKA, Kan.—A "two-bit" down payment on small appliances starts the dollars rolling on major appliance sales for Ed Marling Electric Store, Westinghouse dealer here, as the quarter weekly payments build store traffic into large volume sales.


Mr. Marling will sell any appliance costing \$10 or less for a quarter down and a quarter a week. For appliances costing from \$10 to \$20, the payment is 50 cents a week.

He reports that this plan brings customers into his store who might not purchase on any other plan. The customer must make on the

average of 40 trips to the store to pay for the appliance, and each time is exposed to additional appliances on display there.

With that many cracks at a customer, a salesman can usually sell the customer a refrigerator or another appliance. Time payment plans are also available for these.

By careful credit checking, losses through the use of the "two-bit plan" have been kept at less than one-half of one per cent, Mr. Marling reports. Bookkeeping costs have been minimized by the use of payment pass-books.




**Replacement High Side Floats for HERMETIC Units**

Aminco No. 369 is recommended for replacement, on hermetic units. A complete replacement—it should not be disassembled. An Aminco seat prevents corrosion and eliminates float trouble due to acid in the system.

No. 368 is suitable for replacement in a number of well-known refrigerators. May be used with SO<sub>2</sub>, CH<sub>2</sub>Cl and "F-12." Send for bulletin No. 30.

**AMERICAN INJECTOR CO.**  
1481 FOURTEENTH AVENUE, DETROIT, MICH.  
Pacific Coast: Van D. Clothier, 1015 E. 16th, Los Angeles  
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.



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Ace Equipment simplifies display cabinet building. Full instructions for assembly in catalog easy to follow.

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**For This New Self-Serve Produce Case**

It's OPEN! The customer can reach right in—no doors to slide—and embodies a new principle of refrigeration (Pat. appl'd for).

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**THE ACE of Tube Cutters**

Of all the Imperial tools that are so widely used it is safe to say that the No. 174-F Tube Cutter is the "king of the crop" or the "Ace in the hole." You can buy cutters for less money, but you can't buy anything the equal of it

**THE IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago, Ill.**



for handling tubing work. The tube rests against two rollers, with vertical groove, making it possible to remove flare, when desired. Brass forged body, chromium plated finish. Knurled handle. Complete with reamer.

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**Pressure Sealed DEHYDRATOR**

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STOCKED BY LEADING JOBBERS

## Radio Tales About a 'Leisure House' Aimed To Create Fall Appliance Sales

KNOXVILLE, Tenn.—To sell appliance prospects on buying this fall instead of waiting until spring, a sales promotion plan called "Leisure House Campaign" got under way here Oct. 1, and with dealers co-operating with Knoxville Electric Power & Water Board, an intensive drive will be made to cash in on the estimated fall sales of \$500,000.

The 15-week campaign is centered around a completely modern all-electric leisure kitchen located in the utility's building. Tied in with this kitchen appeal is a series of 26 dramatized radio programs to be broadcast twice weekly over station WNOX in Knoxville. These programs, a dramatized picture of a typical American family, are designed to place the story of electrical appliances before every prospect. With 30,000 radios in the immediate territory, and 211,000 in the Knoxville trade area, the promotion power of these programs is expected to reach a new high.

Every means of promotion will be used to sell prospects on the idea of buying this fall. Semi-weekly cooking schools, special demonstrations, radio programs, publicity pictures, recipes, news stories, direct mail, and newspaper advertising will be utilized in the drive.

### NEED IN WINTER STRESSED

Main point to be used in achieving an estimated \$75,000 in refrigerator sales this fall will be the need for refrigeration in the winter. Only 15 days in the average Knoxville winter stays within the 32 to 50° "safety zone," according to weather reports, and salesmen are being urged to use this appeal. The increased amount of cooking in cold weather will be used to focus the housewife's attention on a new range. Electric range sales are expected to reach a new high of \$76,000 this fall.

The semi-weekly cooking schools will be held in the utility's "Leisure House," and each cooperating dealer will have certain days to bring

prospects in for a demonstration by the utility's home economists. Tickets of admission will be used throughout the campaign. Dealers will be issued the tickets so they can "hand-pick" their own prospects. Three attendance prizes will be given away at each cooking session, boosting the attendance at the demonstrations.

Each woman attending the cooking school will be asked to fill out an attendance card which will be turned over to the dealers. Information given will show the number of persons in the family, electrical equipment now owned, age of such equipment, and the appliance she wants to buy in the near future. Salesmen are urged to follow up this information with personal calls.

### LUNCHEONS UTILIZED

Prospects may also be invited to special luncheons. Small groups will be offered the use of the utility's electric kitchen and auditorium during any morning, afternoon, and evening available. Dealers furnish only the food and the prospects. Women's clubs and fraternal groups will also be invited to hold their meetings in the assembly room of the utility, with the stipulation that 15 minutes will be given over to an appliance demonstration by the home economists.

To sell the "Leisure House" radio program, 56,000 direct-mailing pieces will reach prospects. The first mailing will plug the radio program, while the second mailing, making it twice around to every customer on the power company lines, will plug electrical appliances.

Cooperating with the utility in the fall sales drive are Sterchi Bros., Fowler Bros., George's, Miller's, Sears, Roebuck & Co., Electric Home Servants, Woods-Taylor-Cox, and Woodruff's. These dealers are paying for the largest part of the program, while the Knoxville Electric Power & Water Board will pay the equivalent of two dealers' shares.

## 'Cards' Lost -- But James Men Didn't Their Hits In a 'Different' World Series Contest Net Them Cash, Table Silver, New Hats

ST. LOUIS — Jumping into the St. Louis Cardinal's fight for the National League pennant with a "World Series" sales contest James & Co., General Electric distributor here, produced a "gas house gang" of dealers and salesmen that slugged its way to the top of the sales heap in a blistering two-weeks' campaign.

The "play ball" signal was given on Oct. 1, with "hits" being scored on all domestic appliance sales, based on a suggested retail price list, minus trade and installation costs, with full contracts and down payments to be turned in by Oct. 18. Weekly reports of dealers were mailed in as "box scores."

"Singles" were scored on sales of major appliances such as washing machines, ironers, and floor cleaners; "doubles" on ranges, stokers, \$100 in kitchen cabinets, etc.; and "triples" on dishwashers, disposals, water heaters, and double deals made up of two singles sold at once. "Home runs" were scored on double deals of refrigerator and range, refrigerator and stoker, range and vacuum cleaner, and range and washer.

Some of the sales sluggers were able to make two or three "hits" on one sale, particularly in the case of selling an all-electric kitchen or a two-or-more appliance setup. Four consecutive "hits" scored a "run," and a "double" and two "singles" or a "single" and a "triple" also scored a marker. "Home runs" did not clear the sacks, however, as each "run" had to be independently scored. A huge scoreboard set up in the James & Co. building showed the scoring position of all competitors.

For the "players' share," James & Co. cut a bonus melon of 3% cash for four "runs" and over, 2% for three "runs" and more, and 1½% for two "runs." Single "run" scorers received ½ of 1%. Total "runs" scored determined the basis for reward on all business landed. The players were docked for "errors."

Each miscue, consisting of missing any meeting called by the distributor or dealer, subtracted one "hit" from the lagging player's score.

Salesmen in the game split a \$100 prize, awarded to the 25 high-scoring men according to the percentage of his sales to total business. The service department of James & Co., headed by Earl Taylor, offered two free service calls to each dealer, as an "assist" in winning goodwill, and made an offer of an extra \$3 on every range sold.

An award for the "most valuable player" was a 48-piece silver set and a walnut dining table. All salesmen in the top 50% of the sales volume received new hats.

Highest "batting average" was garnered by Gene Repetto of Union Appliance Co., who chalked up six "runs" and three men "on the bases." Jack Milton of Milton Appliance Co. was in the runner-up spot, with five "runs" in and one man left on the sales bases.

**Condensing Units for every commercial refrigeration and air conditioning requirement . . . Also packaged air conditioners.**



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Division of Curtis Manufacturing Co.  
1912 Kienlen Ave., St. Louis, Mo.

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Seven Models of Compressors  
Fifty-eight Models of High-sides from ¼ H.P. to 15 H.P.  
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**REFRIGERATION TUBING IS SOFT**

YOUR JOBBERS CAN SUPPLY YOU

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1413 CENTRAL AVENUE DETROIT, MICH.

**KERO TEST**

Valves and Fittings

The Standard of the Industry

**Kerotest Manufacturing Co.**  
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**Fulco**

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**REFRIGERATOR COVERS**

Write for Prices

Cannot be surpassed for long life and general usage . . . best quality covering with special reinforcement at edges . . . made with our special non-lump filler. Fits any refrigerator.

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Minneapolis New York Kansas City, Kan.

**ACME INDUSTRIES, INC.**

JACKSON MICHIGAN

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800 well appointed rooms, each with radio and both tub and shower—from \$3.00. Two popular priced restaurants: the Pine Room with its speedy service and coffee shop prices, and the famous

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Still New York's gayest hotel restaurant.

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Opposite the Waldorf-Astoria

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**Quikol**  
BEVERAGE COOLERS  
10 MODELS FOR  
S&S COOLERS  
LIMA, OHIO

**GET PEAK PERFORMANCE**  
with **SPORLAN**  
Controlled  
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**A Dehydrator that is really Dry.**  
**Mueller Brass Co.**  
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Complete line of Meat and  
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Refrigerator Co.  
Indianapolis, Indiana

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AND SWITCHES  
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Write for Catalog  
**PENN ELECTRIC SWITCH CO.**  
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Manufacturers are in-  
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frigerating units.  
**Universal Cooler Corp., Detroit**

The Most Accurate Control  
Valve for Small  
Capacity Systems  
The "TK" Thermo Valve  
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on old shafts as well  
as new with  
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"ANTI FRICTION"  
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Copper-Braced Steel. Cop-  
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FOR ALL TYPES OF  
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AIR CONDITIONING  
**Bush**  
Mfg. Co.  
Hartford, Conn.

## Service Men's Problems

### Don't Wait For the Job To Come To You

113 N. Second St.  
Shamokin, Pa.  
Nov. 1, 1939

Editor:

In regards to your letters published about correspondence schools and the Refrigeration Industry about employment of students after completion of course, may I say what I have found to be the trouble?

The student who does not make out is the one who does not know where he can become employed after he graduated. He has to make contacts while studying and he should try to make sure he can become employed, by his own efforts, so he can get the practical experience so needed.

If, while studying, he would go out one day a week with an experienced service man to learn—how to approach a customer, how to go about servicing, and how to bring that customer into closer relation with the store—he has gone a long way towards becoming connected and staying connected with the industry.

Also upon completion it takes further studying of the lessons and other texts, practical experience, advice of others who have had the experience, your aggressiveness to go look for work, and a good personality to sell yourself.

As an R.A.C.I. graduate I know just what it is to become connected with the refrigeration industry. Since 1936 when I left R.A.C.I. laboratories I have had fair success. I became employed at once and worked in Philadelphia, Pa., and Wilmington, Del., for one concern. As I had some experience while studying I made a good showing, but I also know of two other R.A.C.I. graduates who the company hired who didn't stay long because they lacked training on quick diagnosing and customer relationship.

I have also corresponded with several of my R.A.C.I. laboratory classmates and know that not every one of them have become service men, and I know some never will!

It is sometimes a hard matter to become connected with the industry for full-time employment. As this past summer I was employed at a local store for the summer months only, as they only have service then. This makes me more desirous to look for work with employment 12 months a year. I have had four full years' experience now and know there is someone somewhere who desires a good man and I want to be that man.

May I state to present students—get a connection for employment at once, make contacts at once now, don't expect to come back from Chicago, Ill. and sit and wait for the refrigeration industry to come and look for you—you must look to them. Go out in your spare time with a good experienced service man and watch him and learn. Let him teach you, too!

I hope this carries a message to all as from my experience of correspondence training, employment experiences, and my present employment I still know that I can, that you can, get employment if you look yourself over and do what I have outlined.

RICHARD J. SOUDEN

### Too Many Poorly Trained Service Men

53 W. 84th St.  
New York, N. Y.

Dear Sirs:

I was once connected with a trade publication, and I know that publishers can wield a great influence over the destiny of the field that they represent.

In reference to the controversy about the Air Conditioning and Refrigeration Schools and the prospects of the graduates, I first want to state that I am not disgruntled because I spent a lot of time and money for a course, and then couldn't get a job. I have not taken any course, and I have been continuously employed in the business since I started in 1932.

I became quite well acquainted with some of the instructors in these schools in New York City, and as a guest I heard the lectures, observed the practical training, and interviewed many of the graduates who were looking for jobs.

I have of course no statistics of the number of men who take these courses every year, or of the number of new

men that can be absorbed in this business every year, but judging from the number of applicants that will answer a 2-line want advertisement for one job—it is a sad story!

Besides the fact that these schools enroll many more men than there are available jobs, the next question is: Can a man learn the business by taking these courses?

Again, I can only cite from personal observation of the students. With exceptions, of course, their fundamental conceptions were not very sound; their practical training also seemed to have been perfunctory. If I can't hire an experienced man, or a man with sound training, I would rather train him from the start.

The glaringly exaggerated and incredible statements of some of these schools should be sufficient warning to any but the gullible. I think there should be a Federal investigation—they use the mails!

And I hope you will turn your Good Offices and Guns of Publicity toward obtaining legislation for the elimination of the "quack engineers." (The "Joe Kerplunkuses" and "the shoemakers"—quoting Gordon H. Simmons.) They give the industry a black eye. I have known of their fixing the same machines so often that the owners became disgusted, and went back to the icebox.

Why shouldn't we have to pass an examination and submit proof of apprenticeship and experience, and be licensed the same as steam engineers, electricians, plumbers, etc. That will be the only way that we will get better wages.

FRANK C. KNEVEL

### Locker Exhibition & Operators Meeting To Be Held In Iowa

(Concluded from Page 1, Column 3)  
er plant operation in connection with creameries.

K. F. Warner, senior meat specialist of the U. S. Department of Agriculture at Washington, D. C., also will speak.

From the Farm Credit Administration at Washington, D. C., will come S. T. Warrington, agricultural economist who was formerly associated with the University of Minnesota, to offer the results of his extensive research in the locker field.

The equipment exhibits will form an important feature of the meeting. Never before, the committee claims, has the prospective locker plant builder had the opportunity of seeing so much up-to-date locker equipment under one roof.

Names of exhibiting firms, and the equipment which they will display, are as follows:

Witte Engine Works, diesel engines; Castle Engineering Co., diesel engines; Midwest Metal Stamping Co., Midwest lockers and freezer trays; Master Refrigerated Locker Systems, Inc., Masterbilt Hydroloc individual lockers; Dole Refrigeration Co., Dole vacuum plates.

Frigidaire commercial division, General Motors Sales Corp., Frigidaire compressors; Pacific Lumber Co., Palco wool insulation; Baker Ice Machine Co., Baker ammonia and "Freon" compressors; Iceberg Refrigerated Locker Systems, Inc., normal temperature locker room installations; Stewart-Warner Corp., Dual-Temp domestic refrigerator.

United Frosted Foods, Inc., quick-frozen foods for locker plant distribution; Charles Q. Sherman Corp., Sherman Frostfood Display; All-Steel-Equip Co., Inc., A.S.E. Froz-N-Food lockers; Booth Fisheries, quick-frozen foods; Lily-Tulip Cup Corp., Lily-Tulip Nestrites; The Locker Patron, publication.

Biro Mfg. Co., electric meat, fish, and bone cutters; Lindley Box & Paper Co., containers for frozen food storage; McQuay, Inc., McQuay locker room unit cooler; McGraw Machine Co., Sanilok lockers; Paul Maehler Co., metal smoke ovens; Dewey & Almy Chemical Co., Cry-O-Vac bags and packing machines; Simmons Merchandising Co., Spertifier.

Griffith Laboratories, meat curing equipment and supplies; Durabilt Steel Locker Co., Durabilt Lockerators; Stover Mfg. & Engine Co., diesel engines; Armstrong Cork Co., corkboard and Polar Chest locker systems; Dairy Industries, Inc., Dico full flooded ammonia evaporators.

## Federal Trade Commission Issues 'Cease & Desist' Order Against Roy Hemphill Schools

WASHINGTON, D. C.—Federal Trade Commission has issued a cease and desist order against Roy Hemphill, trading as Diesel Power-United Engineering Schools, San Francisco, prohibiting misleading representations in the sale of correspondence courses in Diesel engines, air conditioning, and refrigeration.

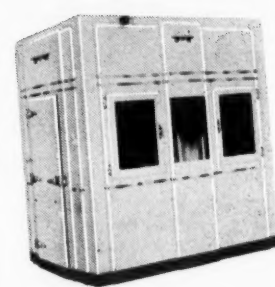
Two similarly named corporations of which Mr. Hemphill was president, located in Minneapolis and Kansas City, Mo., also were involved in the cease and desist order.

The order forbids representations that the respondents' schools occupy a dominant position in their fields;

that their courses qualify a student for any position requiring a degree of skill or technical knowledge greater than that required of a mechanic; that there is a great demand for graduates of the respondents' schools, and that the respondents procure employment for students and graduates, unless such is a fact.

Findings of the commission are that the respondents, after issuance of the complaint against them, eliminated the word "engineering" from their trade and corporate names, and that Mr. Hemphill was succeeded as president by W. W. Kerschner in January, 1938.

## The profit line for '39 FEATURES TAILOR-MADE COOLERS



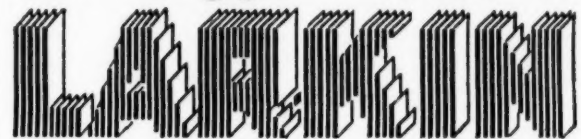
Sell more compressors by including Sherer Walk-in Coolers on your contract. Tailor-made to meet requirements.

The most beautifully styled cooler on the market is the result of custom-building, with quality materials by skilled craftsmen.



**SHERER-GILLETT CO.** MARSHALL, MICHIGAN  
Manufacturers of Refrigerated Display and Storage Equipment

## For Bigger Profits Look To—



Refrigeration Products

They win you customers—They're made right—Priced right

The Patented LARKIN COIL

HUMI-TEMP Units DISSEMINATOR Pans

Instantaneous WATER COOLERS

Today—See Your Jobber or Write Direct to

**LARKIN COILS, Inc.**

General Offices and Factory  
519 Fair Street, S. E.,  
ATLANTA, GA.

Branch Factory, 57-59 East Eleventh St., New York City

**Gilmer's**  
"Eye-Ful" Tower  
Merchandiser  
with  
Handimeter

... complete with 35  
most popular-sized  
belts... pays \$13.92  
clear PROFIT!

Order it today!  
Make it Your "On-  
the-counter" F.H.P.  
Belt Department



For details write to **L. H. GILMER COMPANY**

Tacony  
Philadelphia

**World Wide**  
NEW YORK, N. Y. — Suite 772 General Motors Bldg., 1775 Broadway.  
CHICAGO, ILL. — 112 North Green St.  
DETROIT, MICH. — 6432 Cass Ave.  
LOS ANGELES, CALIF. — 143 S. Alexandria.  
ST. LOUIS, MO. — 593-595 Arcade Bldg.  
BIRMINGHAM, ALA. — 1203 South 18th Ave.  
DALLAS, TEXAS — 2211 Commerce St.  
DENVER, COLO. — 1526 Ivy St.  
CANADA — 1127-31 Dundas St., London, Ontario.  
EXPORT — Tecumseh Products Export Dept., 1002 Palms Bldg., Detroit, Mich.

**TECUMSEH PRODUCTS COMPANY, Tecumseh, Mich**

## REFRIGERATION and AIR CONDITIONING PARTS and EQUIPMENT

TO SERVE YOU MORE QUICKLY **12** CONVENIENTLY LOCATED WAREHOUSES

WRITE FOR CATALOG

**THE HARRY ALTER CO.**  
1728 S. MICHIGAN AVENUE, CHICAGO, ILLINOIS  
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BROOKLYN  
BRONX  
JAMAICA  
NEWARK  
DETROIT  
CLEVELAND  
ST. LOUIS



## ASRE To Celebrate 35th Anniversary

(Concluded from Page 1, Column 5)  
Deane Perham and Ben E. Seamon, chairman and secretary of the Chicago section of the A.S.R.E., with members of the Chicago group, serving as a reception committee.

The tentative convention program follows: (names of speakers will be announced next month):

### WEDNESDAY, JAN. 17

10:00 a.m. Industrial Refrigeration "Refrigeration in the Oil Industry"; "Use of Expander Engines in the Oil Industry"; "Refrigeration in Tire Manufacture."

1:00 p.m. Welcome Luncheon

2:00 p.m. Domestic-Commercial Refrigeration "Pressure Drop in Small Pipes"; "Charging Units with Refrigerants."

### THURSDAY, JAN. 18

10:00 a.m. Conference on Refrigeration. Research in Agriculture. Review of investigations under way at several experiment stations; reviews of special classes of food products; informal discussion.

10:00 a.m. Conference on Corrosion. Three topics will be considered—copper plating of compressors, treatment of water in air conditioning for bacteria, and general corrosion.

2:30 p.m. Thirty-fifth Anniversary Ceremony of the A.S.R.E.

Recognition of charter members. Induction of honorary members. "Refrigeration in 1904." "Refrigeration in 1954." Intermission.

"Frozen Foods from the Manufacturer's Angle."

"Distribution of Frozen Foods by Independent Wholesalers."

7:00 p.m. A.S.R.E. Dinner-Dance.

### FRIDAY, JAN. 19

10:00 a.m. Meat Refrigeration "Use of the Bacterial Lamp in the Packing Plant"; "Refrigeration Applied to Oils and Fats"; "Perishable Consumption Affected by the War."

## CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words, four cents each. Three consecutive insertions \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

### SALESMEN WANTED

MANUFACTURER of full line of capacitors for every motor desires salesmen on commission basis calling on motor repair trade. Commission is 20%, high discounts and one year guarantee. Write now for exclusive territory and state references and territory covered. Write to DUMONT ELECTRIC CO., INC., 514 Broadway, New York City.

DEALER DESIRES commercial refrigeration salesman, car necessary, experience required, drawing account, car expenses, liberal commissions, write qualifications. WILLIAM B. STOCK, Frigidaire Sales & Service, 201 S. George St., York, Pa.

### FRANCHISES AVAILABLE

COMMERCIAL LINE refrigerator display cases, walk-in coolers, and refrigerators; also direct draw mechanically cooled beer coolers. Sell with Ehrlich Compressors or with any other make. Attractive discounts also financing arrangements to help sell. 70 years in business. Write for full information. EHRICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

COMPLETE COMMERCIAL Refrigerator line. Porcelain corkboard display cases.

**Anaconda Copper Refrigeration Tubes**

Unusually long lengths!



THE AMERICAN BRASS CO.  
FRENCH SMALL TUBE BRANCH  
General Offices, Worcester, Mass.

## Nema U. S. Shipments Hit 68,000 In Sept.

(Concluded from Page 1, Column 1)  
world shipments totaled 2,265,500 units.

World shipments by 17 member-companies of National Electrical Manufacturers Association totaled 81,473 units during the month, as compared with 72,050 units in the same month of 1938, and 87,842 units in September, 1937, the industry's all-time high for the month.

For the nine months of this year, Nema world sales amounted to 1,759,387 units, as compared with 1,221,871 in 1938 and 2,115,071 in 1937.

Shipments by Nema members in the United States alone amounted to 68,033 during the month, with Canadian shipments accounting for another 3,480 units and other foreign shipments totaling 9,960. Index value of total world sales was 139 this September, as compared with 125 in the month last year.

Lacquer-exterior cabinets accounted for all but 4,628 of the month's total shipments, and 4,014 of the porcelain-exterior models were sold to distributors and dealers in the U. S.

### New Louisiana G-E Dealer Formed Through Merger

RUSTON, La.—Lincoln Furniture & Appliance Co. has been formed through merger of North Louisiana Appliance Co. and Singer Furniture Co. of this city. Joseph Freeman, head of the new firm, announces that the full line of G-E appliances will be handled in northeast Louisiana.

reach-in, walk-in and sliding door, full vision fruit and vegetable refrigerators. Originators of open top refrigerated vegetable cases. Full line extra-liberally coiled. Percival-Universal units. Established 1886. 53 years of service. C. L. PERCIVAL COMPANY, Des Moines, Iowa.

SEND FOR PRICES and literature on the General 1940, all streamlined refrigerator display case. Over 40 years' experience manufacturing good commercial display cases. On a comparative price test with other makes of equal specifications, prices are lowest in the country. GENERAL REFRIGERATOR & STORE FIXTURE CO., 519 Bainbridge St., Philadelphia, Pa.

### EQUIPMENT FOR SALE

WE SPECIALIZE in enameled defrosting trays, and carry a large assortment of sizes in stock. Send for our catalogue and trade discount. Exclusive territories are now being assigned to jobbers. PEERLESS ENAMELED WARE CO., 220 Boscobel Place, Bronx, N. Y.

MANUFACTURER of "Freon" window type room air conditioning units wishes to dispose of a limited quantity of brand new 1939 models, AC, 60 cycle, 110 volts; ½ H.P. size, list price \$129.00, less 50%; ¾ H.P. size, list price \$229.00, less 50%; larger discounts on quantity orders. Write Box No. 1187, Air Conditioning & Refrigeration News.

BRAND NEW complete high sides; ½, ¾, 1 h.p. General Electric compressors with General Electric motors; Frigidaire compressors with Delco motors. Low prices, money back guarantee. MARTIN SPECTOR, 520 East 20th Street, New York City.

REPLACEMENT CONTROLS and relays for all standard model Frigidaire. Controls \$4.00 each—Relays \$2.50 each. Also three-tray flooded Frigidaire coils \$2.50 each. "As is" Grunow refrigerators in all sizes. Write for further information. ASSOCIATED REFRIGERATOR PLANT, INC., 3028 Hunting Park Ave., Philadelphia, Pa.

### REPAIR SERVICE

GENERAL ELECTRIC DRI and DR2 Monitor Top units exchanged, \$30.00 F.O.B. our factory. Send your defective unit. On receipt, we make immediate shipment of completely rebuilt, refinished unit with one year unconditional guarantee. Like new in every respect. Westinghouse and Servel hermetic units rebuilt and guaranteed. REFRIGERATION MAINTENANCE CORPORATION, 321-27 East Grand Avenue, Chicago, Ill.

DOMESTIC TYPE thermostatic controls reconditioned like new. Precision work by experts. Years of satisfied customers, among largest in the country. All work guaranteed. Try us and be convinced. The largest thermostatic repair service in the country. It's your guarantee. Prices on request. UNITED REPAIR CO., INC., 342 W. 70th St., New York City.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALELECTRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

### PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

## FTC Studies Effects Of Price Laws

(Concluded from Page 1, Column 1)  
tory costs for the "first six months, the second six months, and the third six months" of operation under resale price maintenance.

Form of the inquiry indicates the collection of information as a possible basis for a case of injury to a competitor not operating under resale price maintenance laws.

The manufacturers' report is the second phase of the investigation pertaining to electrical appliances. FTC recently announced that it has practically completed that part of the inquiry having to do with the activity of trade associations in promoting price maintenance laws.

### Crosley Corp. Profits Up For 9-Month Period

CINCINNATI — Net profit of \$158,376 after depreciation and provision for income tax on sales of \$12,390,090 for the nine months ended Sept. 30 is reported by Crosley Corp. This is equal to 29 cents a share. A net loss of \$43,484 on sales of \$9,397,698 was shown for the corresponding period in 1938.

For the six months ended June 30, the company reported net profit of \$402,057, and indicated net loss for the quarter ended Sept. 30 was \$243,681, as compared with a net loss of \$41,976 in the September quarter of 1938.

## Nema Household Sales In September Show Seasonal Drop But Gain Over 1938

SALES FOR SEPTEMBER, 1939

	Domestic	Canadian	Other Foreign	Total World
<b>Lacquer (Ext.) Cabinets Complete</b>				
1. Chest .....	2†	1	4	3
2. Less than 3 cu. ft. ....	...	69	...	69
3. 3 to 3.99 cu. ft. ....	1,874†	10†	1,256†	3,140
4. 4 to 4.99 cu. ft. ....	14,190	1,122	2,940	18,252
5. 5 to 5.99 cu. ft. ....	8,099	833†	2,240	11,172
6. 6 to 6.99 cu. ft. ....	35,685	1,068†	1,684	38,437
7. 7 to 7.99 cu. ft. ....	594	17†	63	640
8. 8 to 8.99 cu. ft. ....	3,476	50	210	3,736
9. 10 to 12.99 cu. ft. ....	15	...	...	15
10. 13 cu. ft. and up. ....	20	...	...	20
11. Total Lacquer .....	63,951	3,136	8,397	75,484
<b>Porcelain (Ext.) Cabinets Complete</b>				
12. Up to 4.99 cu. ft. ....	1	...	1	2
13. 5 to 5.99 cu. ft. ....	410	24	134	568
14. 6 to 6.99 cu. ft. ....	2,084	23	245	2,352
15. 7 to 7.99 cu. ft. ....	65	1	8	74
16. 8 to 8.99 cu. ft. ....	1,087	8	128	1,223
17. 10 to 12.99 cu. ft. ....	140	1	17	158
18. 13 cu. ft. and up. ....	227	2	22	251
19. Total Porcelain .....	4,014	59	555	4,628
20. Total—Lines 11 and 19 .....	67,965	3,195	8,952	80,112
21. Separate Systems ¼ hp. or less. ....	68	2	744	814
22. Separate Household Evaporators. ....	...	283	264	547
23. Total—Lines 20, 21, and 22. ....	68,033	3,480	9,960	81,473
24. Condensing Units ¼ hp. or less. ....	341	131	334	806
25. Cabinets—No Systems .....	21	...	2	23
Index Value* of Total Dollar Sales. ....	137.	514.	120.	139.

\*Based on weighted sales for 1934, 1935, and 1936. †Includes sales and credits.  
Note: It is estimated that the figures on electric household refrigerators reported to Nema include more than 90% of the industry.

## Change to VALVES

### THEY'LL LICK YOUR VALVE SERVICE Troubles

**Wood Refrigerating Company**  
Automatic Refrigerating Systems  
1539 Penn Avenue  
(Corner 16th Street)  
Pittsburgh, Pa.  
September 19, 1939

**COMPLETE SERVICE**

AIR CONDITIONING  
BUTCHER SHOPS  
PACKING HOUSES  
RESTAURANTS  
CREAMERIES  
CONFECTIONERIES  
BAKESIES  
FLOUBIS  
TAYERS  
BEER EQUIPMENT  
ICE CREAM EQUIPMENT  
WATER-COOLING PLANTS  
BALANCED BEER SYSTEM FOR BAKING AND PACKING PLANTS  
ELECTRIC OVERHAULING  
ICE MACHINERY  
REFRIGERATING MACHINERY  
CONDENSERS  
FITTINGS  
RECEIVERS  
BEER COOLERS  
ICE CANS  
PACKING AGITATORS  
CRANES  
ICE TANKS  
BEER TANKS  
PIPE COILS  
SCISSOR MACHINES  
INSULATOR  
FILTERS  
COOLING TOWERS  
SPRAYS  
SUPPLIES  
ICE MACHINERY OIL  
METHYL CHLORIDE  
AMMONIA

Automatic Products Company  
2450 North 32nd Street  
Milwaukee, Wisconsin


Gentlemen:

After experiencing considerable valve trouble several years back, we were persuaded to try the Automatic Products valve.

Since then we have had occasion to install several hundreds of these valves and have had very excellent results using your valves in combination with WORTHINGTON-CARBONDALE equipment on GLOEKLER MANUFACTURING COMPANY'S refrigerators and display cases.


Very truly yours,

WOOD REFRIGERATING COMPANY




E. T. DALE


ETD/ms



Modern Stainless Steel Refrigerator at West Penn Hospital. Worthington-Carbondale Unit at left.



A-P Model 207 Thermostatic Expansion Valve.

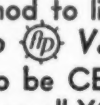


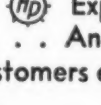
Interior of Gloekler Stainless Steel Refrigerator, showing Meat storage racks, shelves and refrigerator coils.

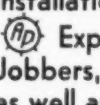
- Installation: West Penn Hospital, Pittsburgh, Pa.
- Equipment: Refrigerator—Gloekler Manufacturing Co. Compressors—Worthington-Carbondale.
- Installed by: Wood Refrigerating Company, Pittsburgh, Pa.
- Valves—A-P.

**AUTOMATIC PRODUCTS COMPANY**  
2450 NORTH THIRTY — SECOND STREET  
MILWAUKEE WISCONSIN

Refrigeration Parts Jobbers, Who Recognize Quality, Stock A-P Valves.

Hundreds of Refrigeration Engineers are proving that one method to lick Expansion Valve Trouble is a "Switch to  Valves."

If you want to be CERTAIN of accurate Refrigerant Control on all YOUR installations, follow the example of others. You'll enjoy the feeling of confidence  Expansion Valves give you on every job. . . . And you'll profit by the satisfaction your customers express in efficient trouble-free installations.

 Expansion Valves are RECOMMENDED by Jobbers, Refrigeration Engineers and Service Men, as well as users of every type of Refrigeration and Air Conditioning. There are reasons for this praise!

## DEPENDABLE

THE BYWORD FOR A-P VALVES